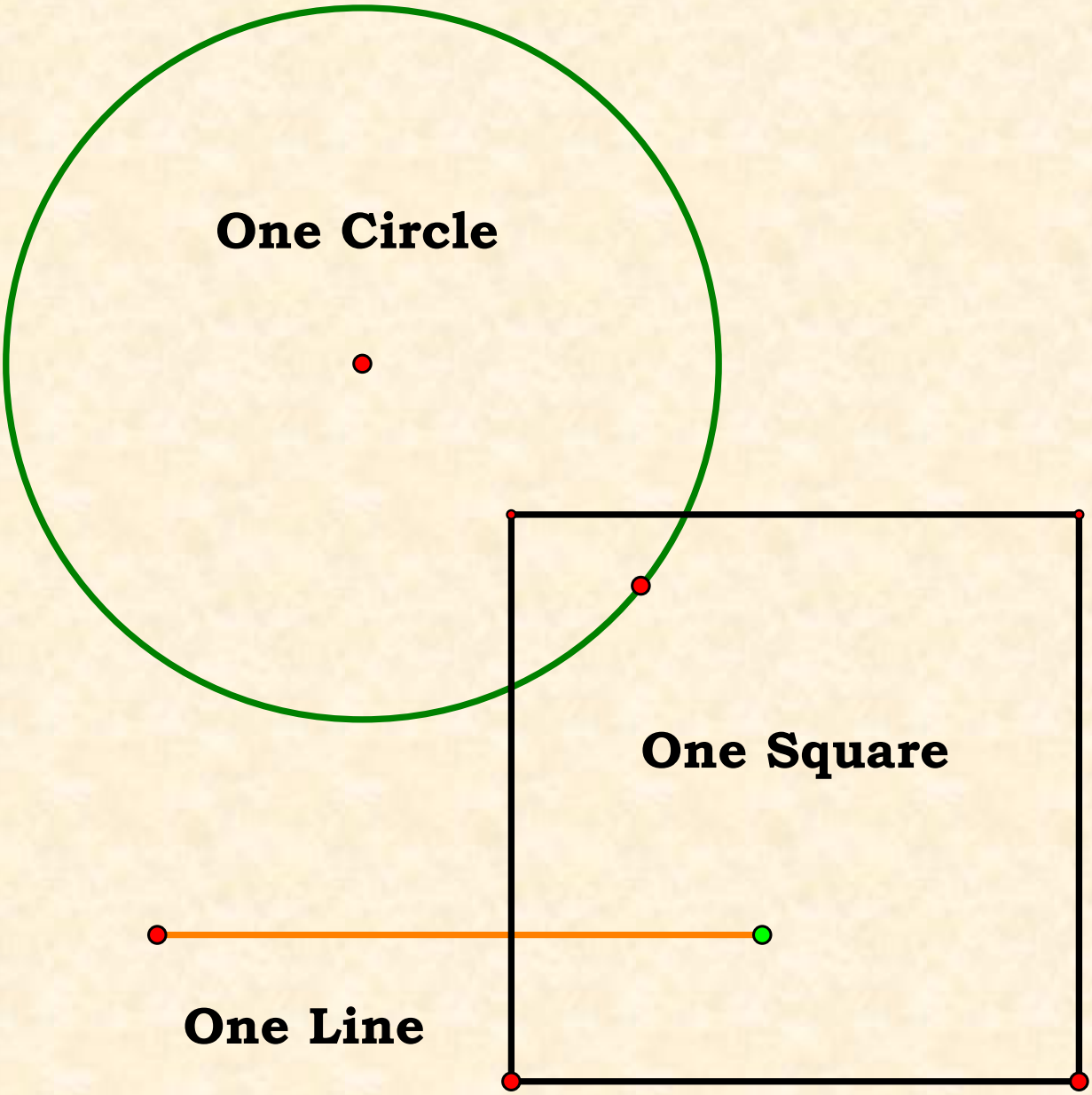
The Book of John



By John Clark

The Book of John

Elementary Grammar

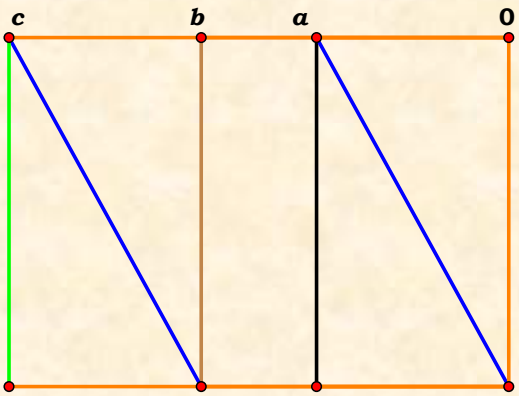
Friday, June 27, 2025

It was written, a long time ago, that mankind would be illiterate until after a certain time in human history. The so-called Delian Problem is another metaphor for that claim. This is why, I set out to write a grammar book. If one cannot think in accordance with the truth of things, then one has lived a wasted and detrimental life.

Addition

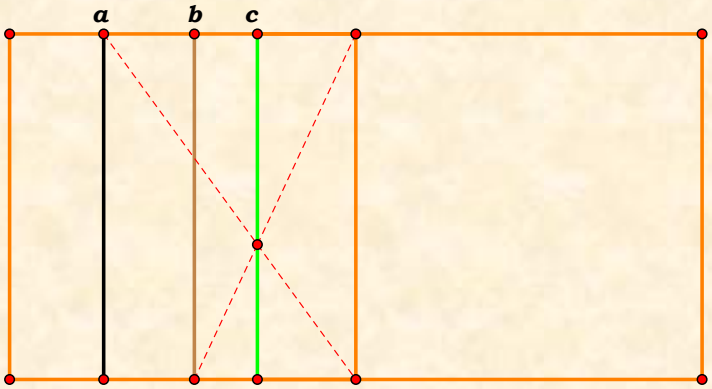
Addition

$(a + b) - c = 0.00000$



Addition

$\frac{1}{a} + \frac{1}{b} - \frac{1}{c} = 0.00000$



Addition by Induction

Written in common Grammar it would be

As a is to 0, so too is c to b.

or again in logical notation,

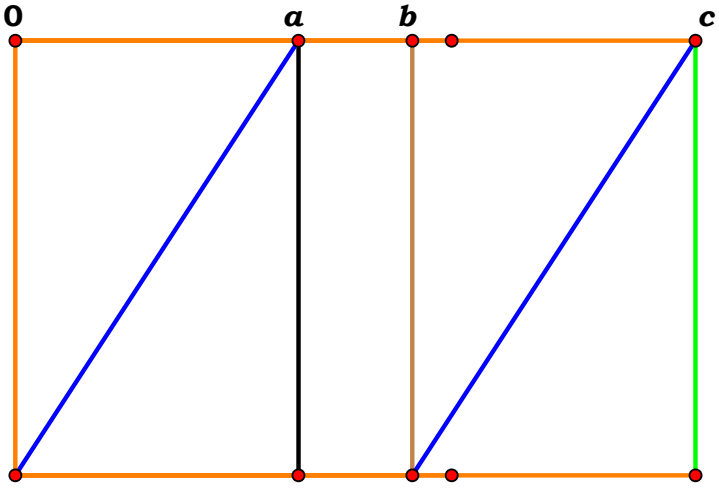
a : 0 :: b : c.

From this arithmetic reasoning, we acquire the notion of equality; equal processes rendered upon equal things, produce equal results, from whence those who like the sound of their own voice, produce as a number of axioms trying to cover every possible processes upon a thing, which is not actually required by anyone of sense. It would be called a self-evident truth which we learn. There are those who, not being able to keep track of all the actually differences in play, like Einstein, end up claiming that the Law of Idenity is not true, because he or his chef heated up his dinner for him and he forgot to account for it.

Therefore, senility makes it a fact that grammar differs from itself. Really! There are two kinds of equality, each commensurate with an element of a thing, i.e., equality is binary. Their historical names are Arithmetic Equality and Geometric Equality. Too often, this fact is forgotten, and thus, we have people trying to enumerate the geometric, when that is not how to present it. Such stupidity gets people claiming that every statement is some kind of hair-brained theory, being too stupid to realize the self-referential fallacy, that grammar is a theory of itself.

Unit **= 1.00000**
a **= 0.64894**
b **= 0.90989**
c **= 1.55883**
(*a* + *b*) − *c* = 0.00000

Addition



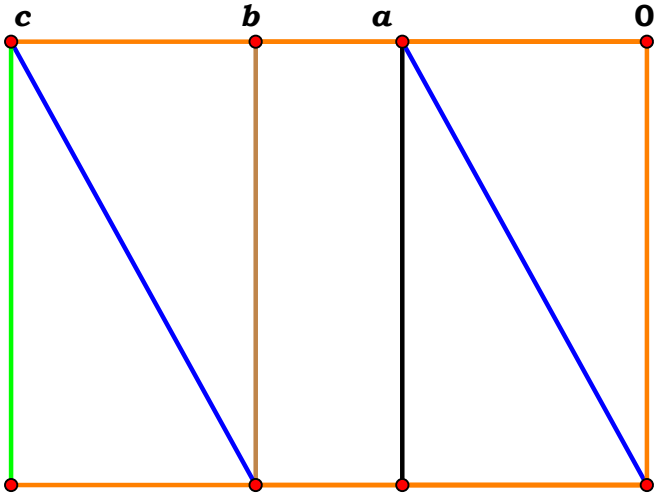
$a := .64894 \quad b := .90989$

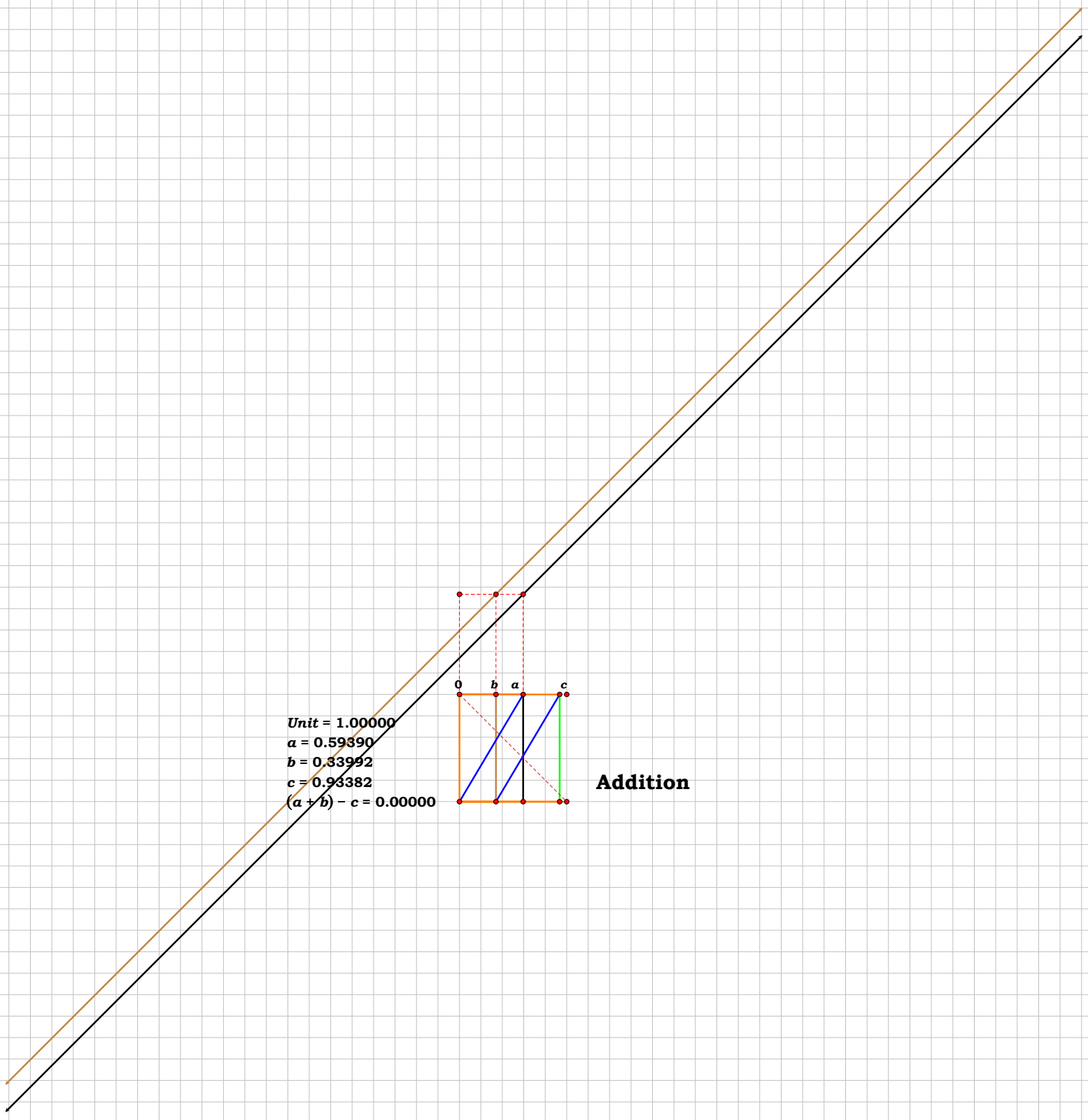
$a := \frac{0 + a}{1} \quad b := \frac{0 + b}{1} \quad c := a + b$

$c = 1.55883$

Unit **= 1.00000**
a **= –0.54937**
b **= –0.87899**
c **= –1.42836**
(*a* + *b*) − *c* = 0.00000

Addition





Unit = 1.00000
a = 0.59390
b = 0.33992
c = 0.93382
(***a*** + ***b***) − ***c*** = 0.00000

Addition

Deductive Addition

$a := .70693 \qquad b := .51907$

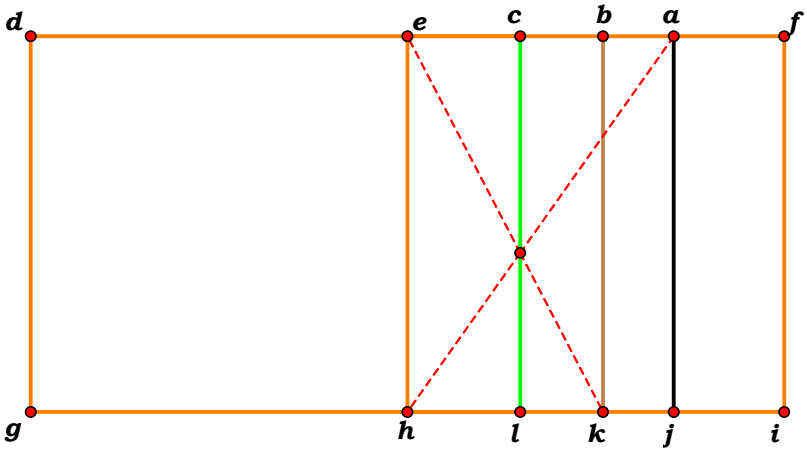
$c := \frac{a \cdot b}{a + b} \qquad c = 0.2993$

Deductive Addition takes place betweeen 0 and 1. In order to perform it, one must treat the values in inverse notation, i.e., using the reciprocal, or as is commonly said, the fraction. It may be that some make the mistake of claiming that the Laws of Nature change when dealing with the small, or the unit.

Addition

$Unit = 1.00000$
$a = 0.70693$
$b = 0.51907$
$c = 0.29930$
$\frac{1}{a} + \frac{1}{b} - \frac{1}{c} = 0.00000$

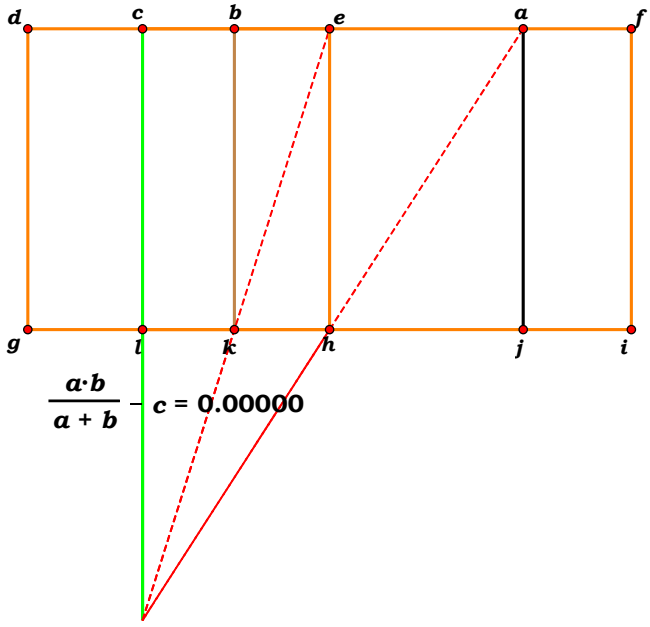
$\frac{1}{a} = 1.41456$
$\frac{1}{b} = 1.92651$
$\frac{1}{c} = 3.34108$



Addition

$Unit = 1.00000$
$a = 0.64169$
$b = -0.31528$
$c = -0.61980$
$\frac{1}{a} + \frac{1}{b} - \frac{1}{c} = 0.00000$

$\frac{1}{a} = 1.55838$
$\frac{1}{b} = -3.17180$
$\frac{1}{c} = -1.61342$

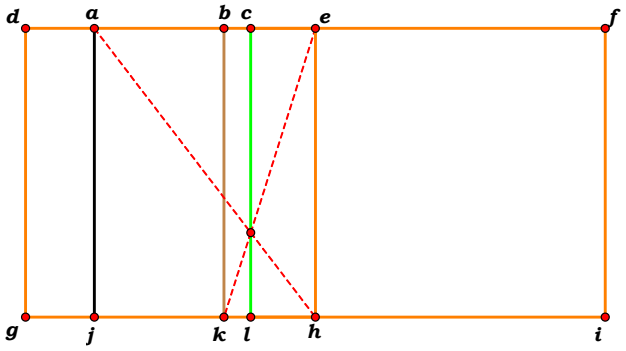


$\frac{a \cdot b}{a + b} - c = 0.00000$

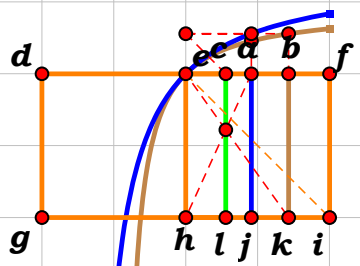
Addition

$Unit = 1.00000$
$a = -0.76263$
$b = -0.31528$
$c = -0.22306$
$\frac{1}{a} + \frac{1}{b} - \frac{1}{c} = 0.00000$

$\frac{1}{a} = -1.31126$
$\frac{1}{b} = -3.17180$
$\frac{1}{c} = -4.48305$



$\frac{a \cdot b}{a + b} - c = 0.00000$



$Unit = 1.00000$

$a = 0.45629$

$b = 0.71526$

$c = 0.27858$

$\frac{1}{a} + \frac{1}{b} - \frac{1}{c} = 0.00000$

$\frac{a \cdot b}{a + b} - c = 0.00000$

Addition

$\frac{1}{a} = 2.19159$

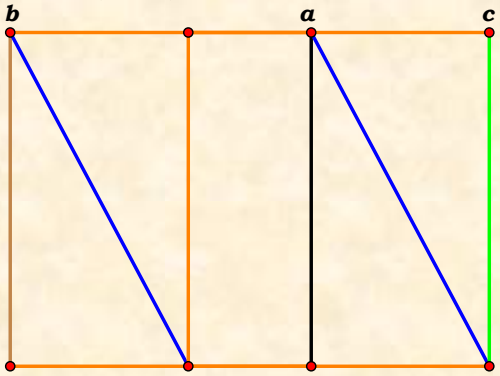
$\frac{1}{b} = 1.39809$

$\frac{1}{c} = 3.58968$

Subtraction

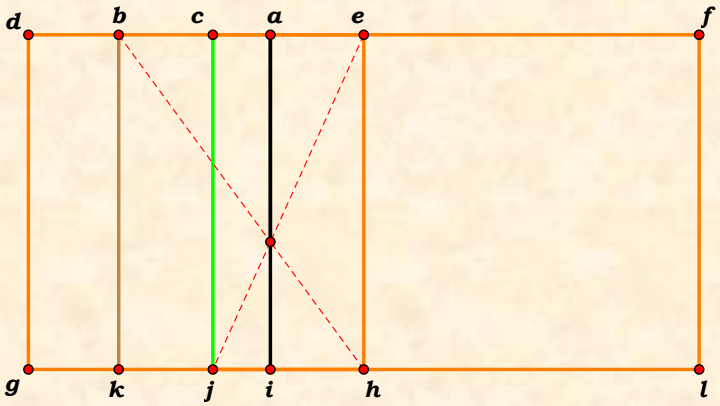
Subtraction

$(a - b) - c = 0.00000$



Subtraction

$\frac{1}{a} - \frac{1}{b} - \frac{1}{c} = 0.00000$



Subtraction by Induction

a := .42233 **b** := 1.01290

c := **a** – **b** **c** = –0.59057

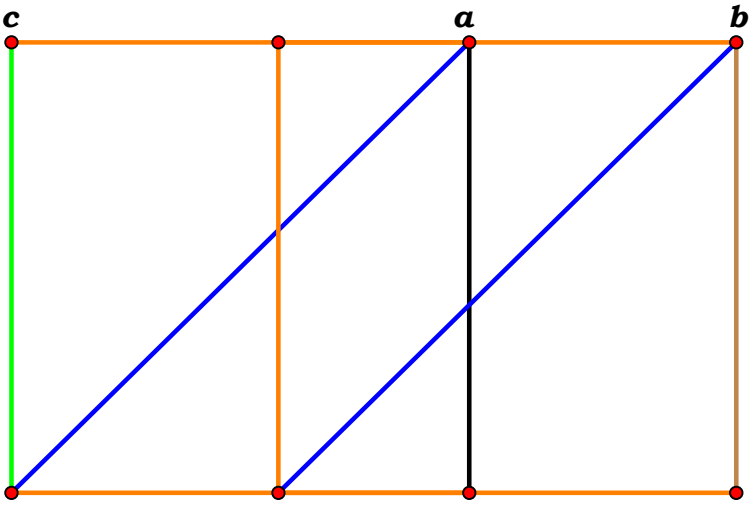
How many people, claiming that there are self-evident truths, bought into the fallacy of non-Euclidean Geometry? Everything we know is derived from perception. If one denies any part of it, they deny the whole of it and reasoning, is not only impossible, it is impossible to every have evolved, there would be no such thing as reality, or the Universe, itself.

Therefore, I treat all theory mongers the same, they are simply mentally handicapped. Think of the parallel lines in the intelligible, the parallel between perception and learnt behavior.

Only the stupid use the word equality as if there is only one kind, arithmetic, and perceptible, when in fact, to deny the one, you must deny the other.

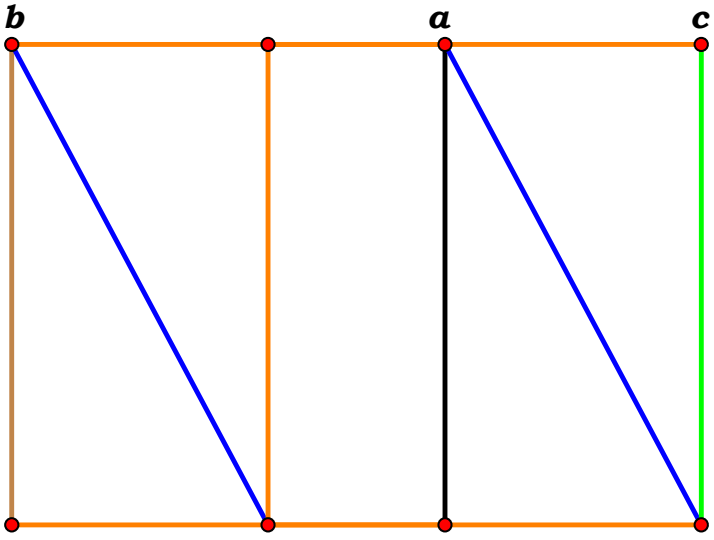
Unit = 1.00000
a = 0.42233
b = 1.01290
c = –0.59057
$(a - b) - c = 0.00000$

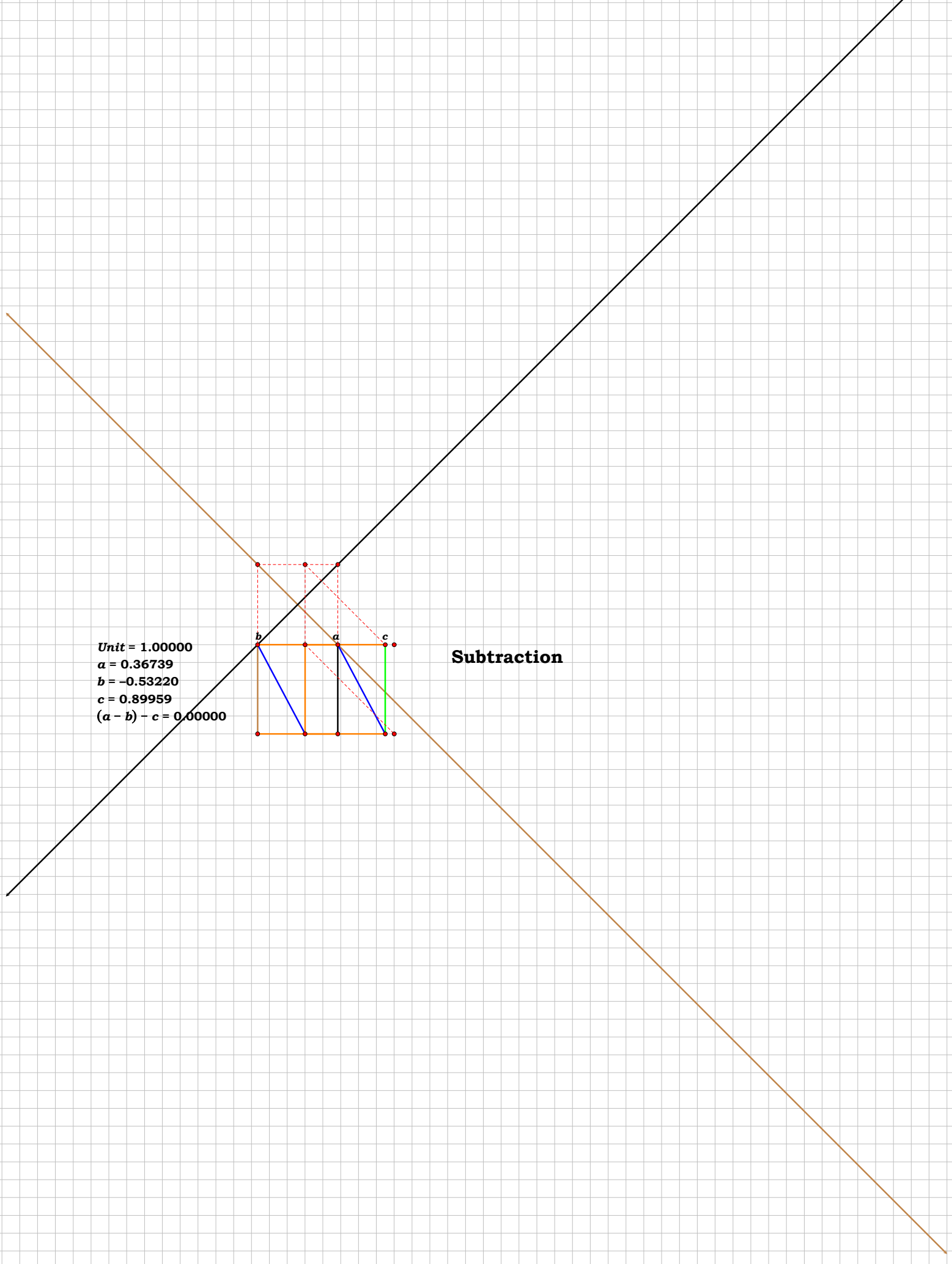
Subtraction



Unit = 1.00000
a = 0.36739
b = –0.53220
c = 0.89959
$(a - b) - c = 0.00000$

Subtraction





Unit = 1.00000
a = 0.36739
b = –0.53220
c = 0.89959
(*a* – *b*) – *c* = 0.00000

Subtraction

Subtraction Deductive

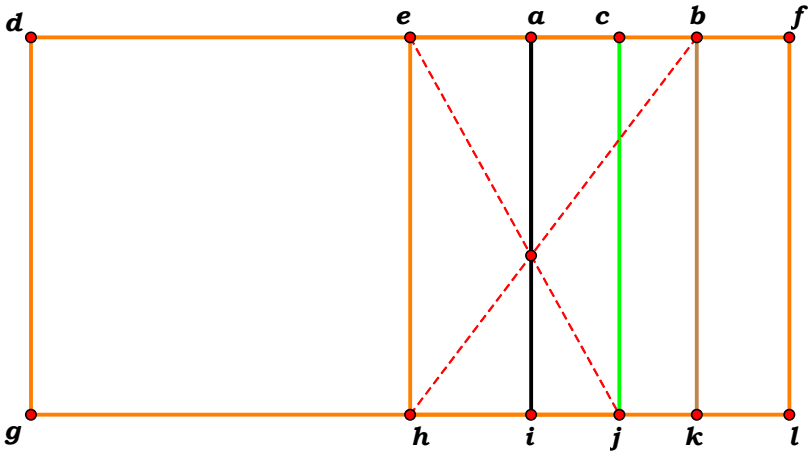
$a := .31894 \quad b := .75599$

$c := \frac{a \cdot b}{b - a} \quad c = 0.55169$

Subtraction

Unit = 1.00000
a = 0.31894
b = 0.75599
c = 0.55169

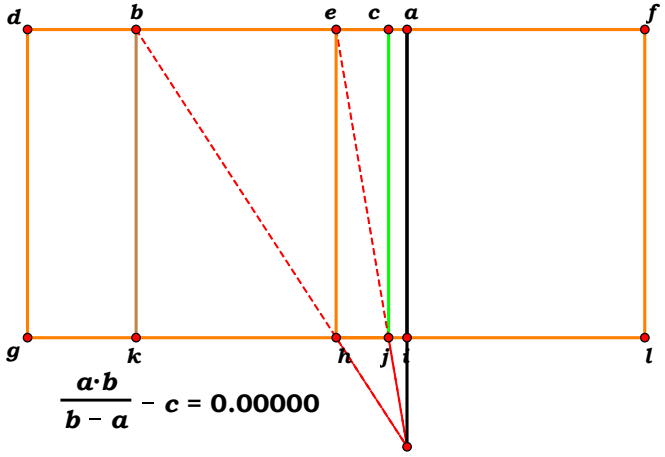
$\left(\frac{1}{a} - \frac{1}{b}\right) - \frac{1}{c} = 0.00000$



Subtraction

Unit = 1.00000
a = 0.22967
b = –0.64833
c = 0.16959

$\left(\frac{1}{a} - \frac{1}{b}\right) - \frac{1}{c} = 0.00000$

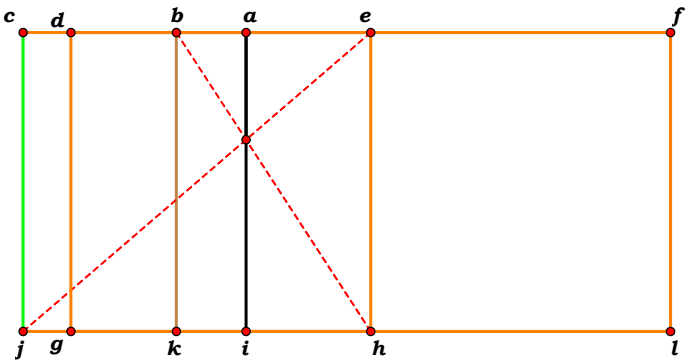


$\frac{a \cdot b}{b - a} - c = 0.00000$

Subtraction

Unit = 1.00000
a = –0.41584
b = –0.64833
c = –1.15960

$\left(\frac{1}{a} - \frac{1}{b}\right) - \frac{1}{c} = 0.00000$



$\frac{a \cdot b}{b - a} - c = 0.00000$

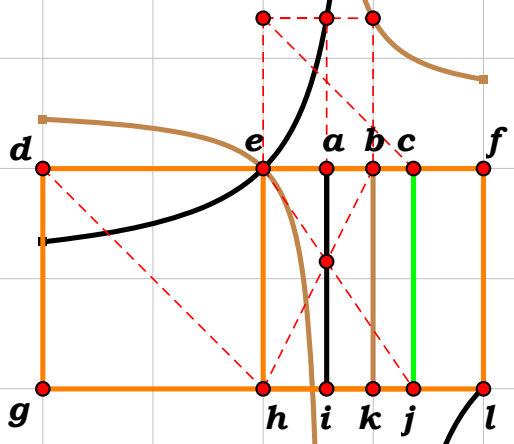
$Unit = 1.00000$

$a = 0.28804$

$b = 0.49847$

$c = 0.68230$

$$\left(\frac{1}{a} - \frac{1}{b}\right) - \frac{1}{c} = 0.00000$$



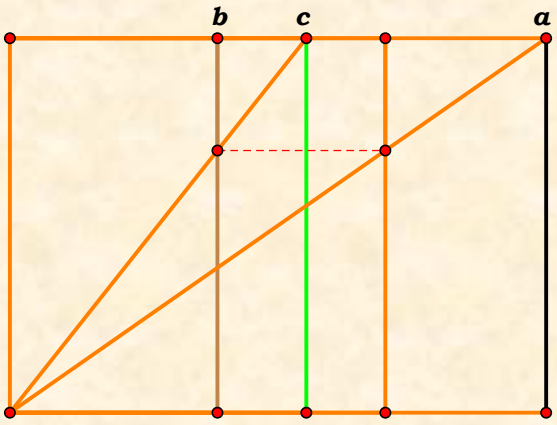
Subtraction

$$\frac{a \cdot b}{b - a} - c = 0.00000$$

Multiplication

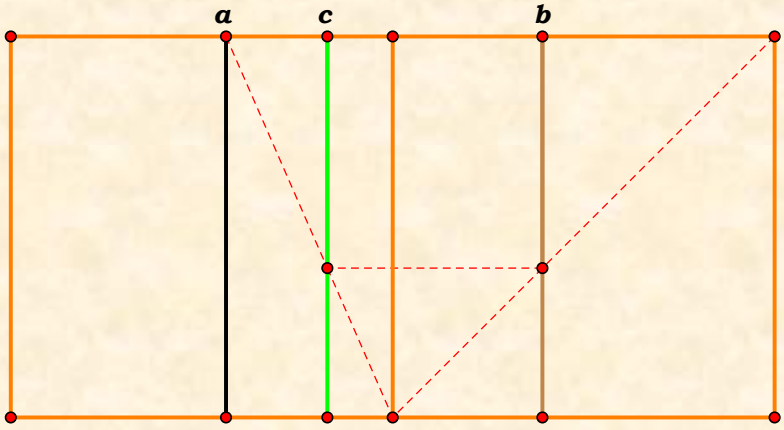
Multiplication

$a \cdot b - c = 0.00000$



Multiplication

$a \cdot b - c = 0.00000$



Mulltiplication by Induction

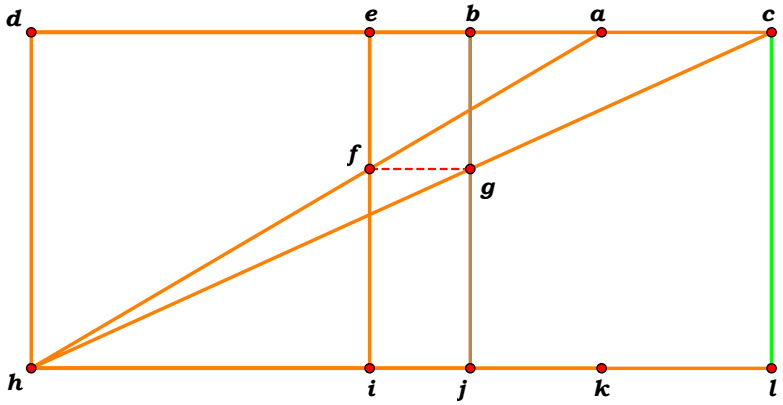
$a := 1.68587 \quad b := 1.29788$

$ei := 1$

$fi := \frac{ei}{a} \quad gj := fi \quad c := \frac{b}{gj} \quad c = 2.18806$

Unit **= 1.00000**
a **= 1.68587**
b **= 1.29788**
c **= 2.18806**
a·b **− *c* = 0.00000**

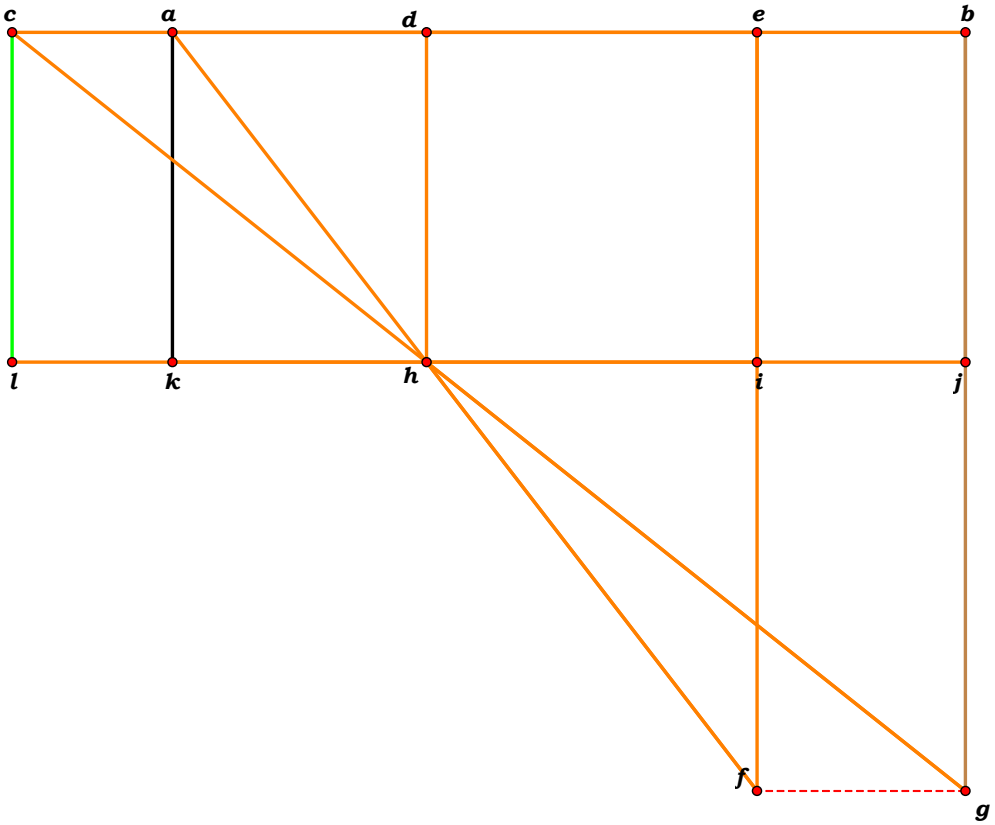
Multiplication

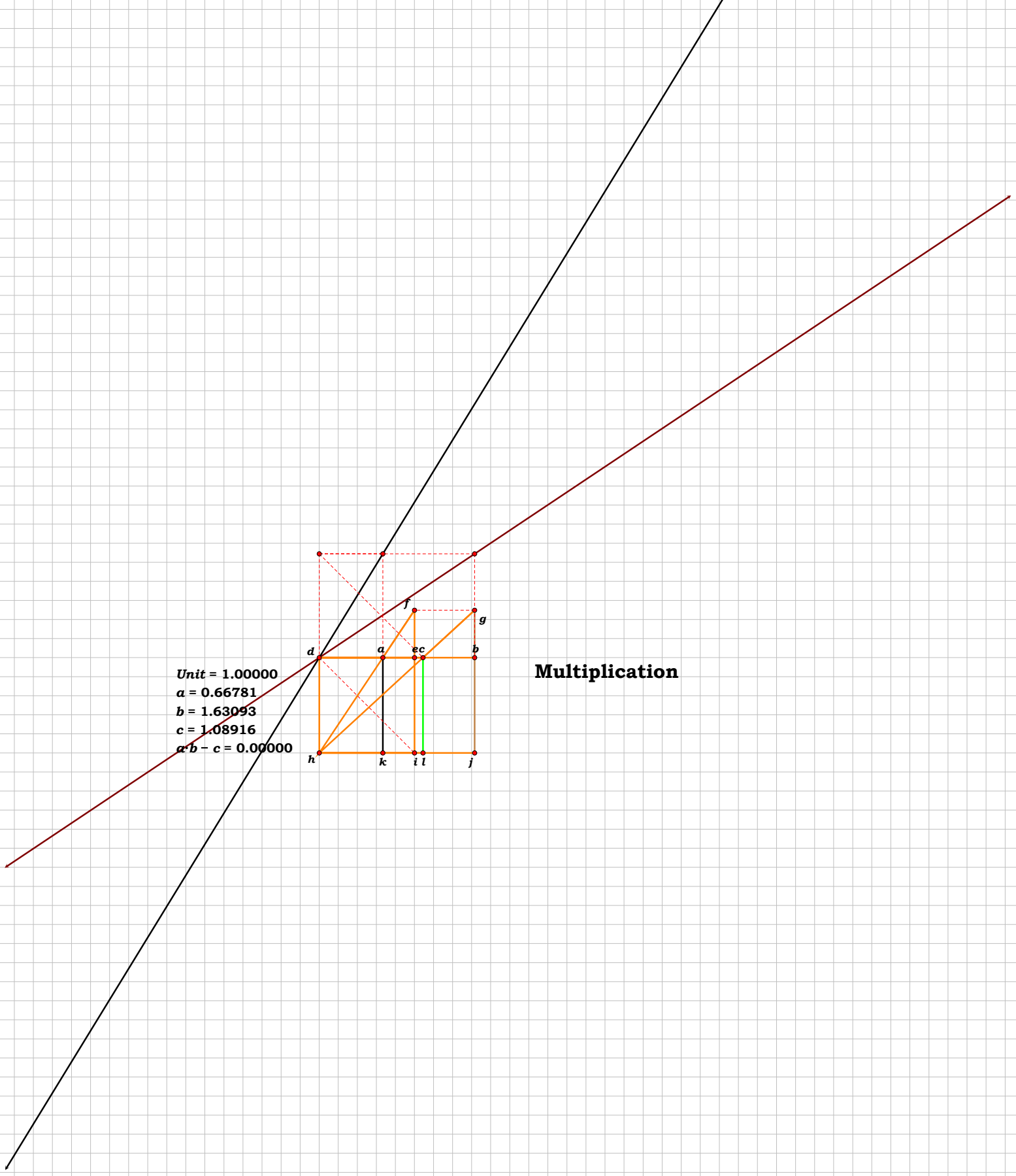


In deduction we took the proportion from the geometric diagonal, here, in the arithmetic, we take it off the arithmetic perpendicutlar as a 1 to 1.

Unit **= 1.00000**
a **= –0.76911**
b **= 1.63093**
c **= –1.25437**
a·b **− *c* = 0.00000**

Multiplication





Unit = 1.00000
a = 0.66781
b = 1.63093
c = 1.08916
a · *b* − *c* = 0.00000

Multiplication

Multiplication Deductive

a := .65886 b := .39203

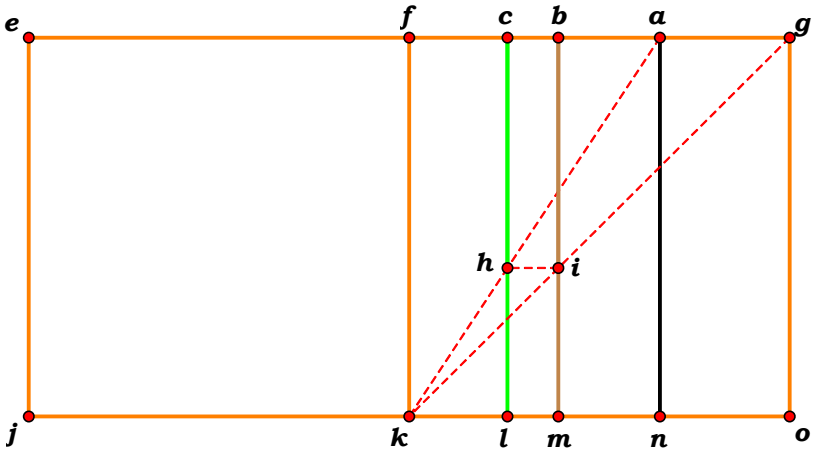
im := b hl := im c := a·hl c = 0.25829

a·b − c = 0

Multiplication and Division are not arithmetic like addition and subtraction; they are geometric, or again proportional; the diagonal gk is that unit proportion. Geometrically you can see the steps which your mind may not form unless you see it.

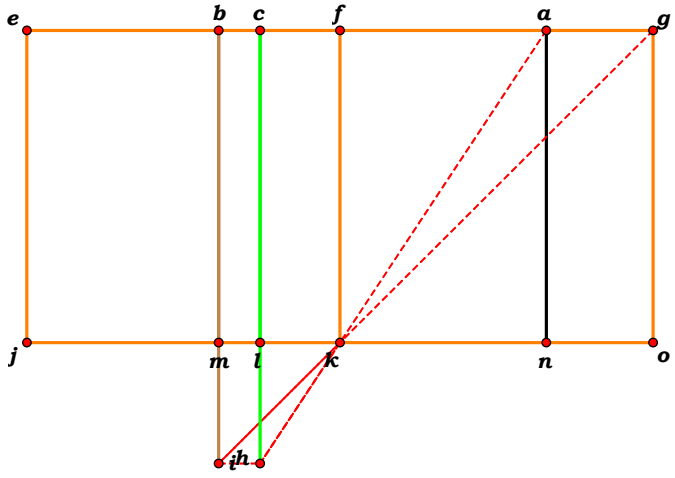
Unit = 1.00000
a = 0.65886
b = 0.39203
c = 0.25829
a·*b* − *c* = 0.00000

Multiplication



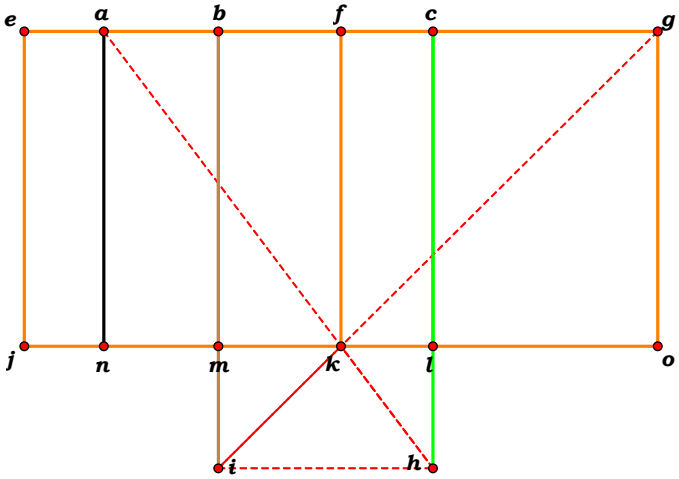
Unit = 1.00000
a = 0.65886
b = –0.38738
c = –0.25523
a·*b* − *c* = 0.00000

Multiplication

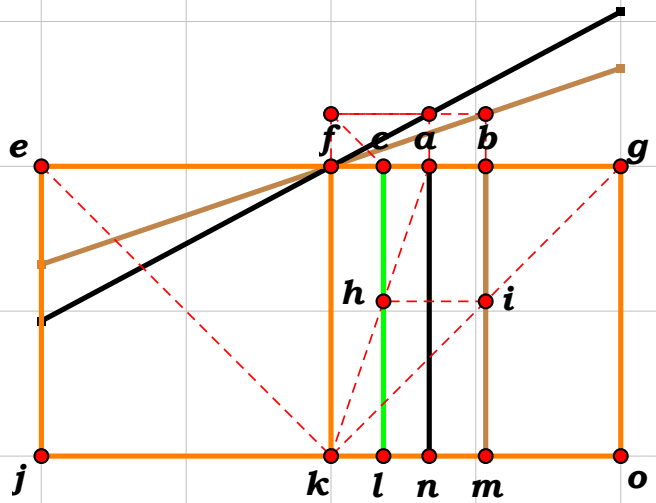


Unit = 1.00000
a = –0.74889
b = –0.38738
c = 0.29011
a·*b* − *c* = 0.00000

Multiplication

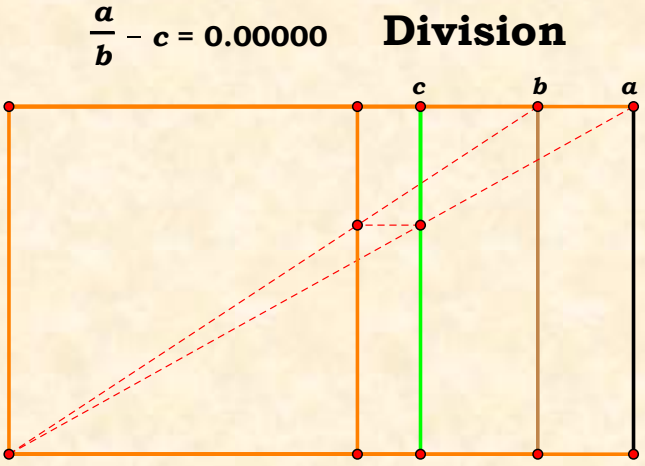


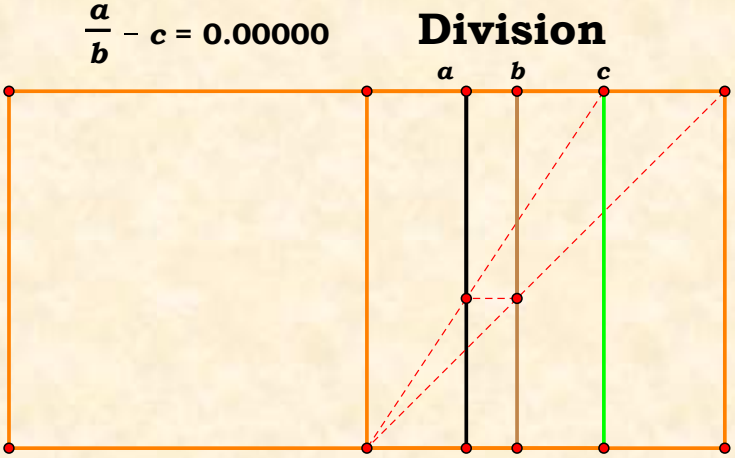
Unit = 1.00000
a = 0.33881
b = 0.53390
c = 0.18089
a·*b* − *c* = 0.00000



Multiplication

Division





Division by Induction

$a := 2.03266$ $b := 1.33908$

$d := \frac{1}{b}$ $c := a \cdot d$ $c = 1.51795$

Unit = 1.00000

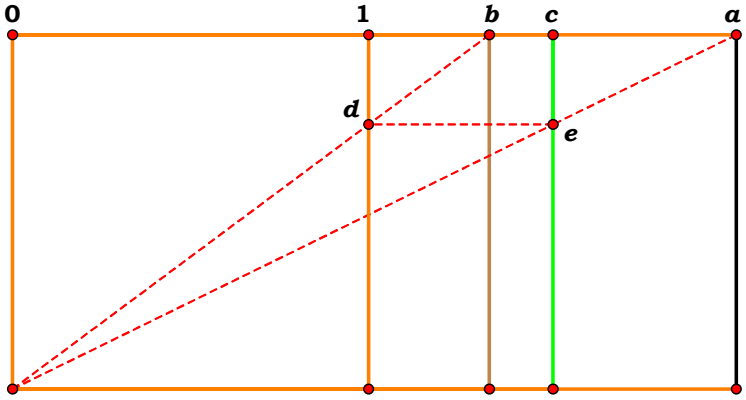
a = 2.03266

b = 1.33908

c = 1.51795

$\frac{a}{b} - c = 0.00000$

Division



Unit = 1.00000

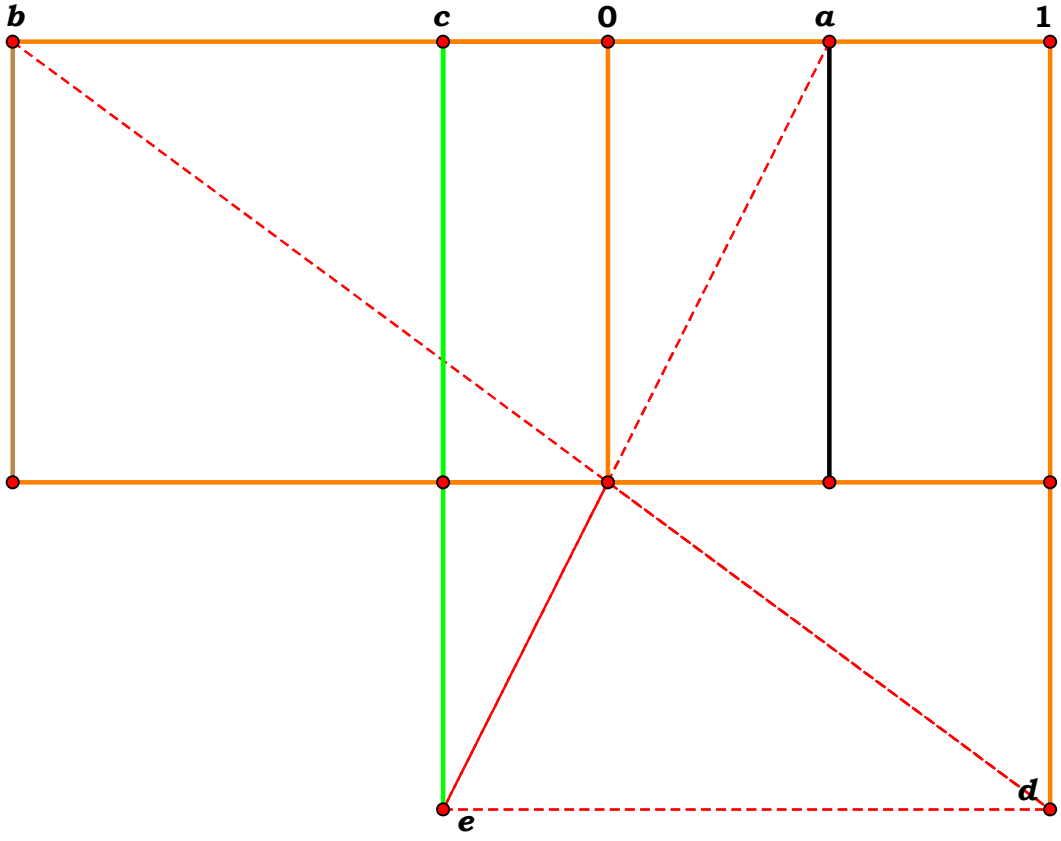
a = 0.50130

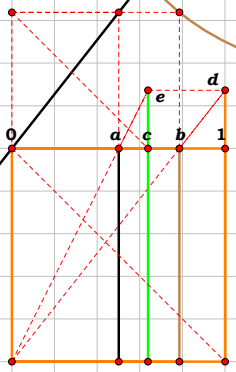
b = –1.34595

c = –0.37245

$\frac{a}{b} - c = 0.00000$

Division





Division

$Unit = 1.00000$
$a = 0.50130$
$b = 0.78536$
$c = 0.63830$
$\frac{a}{b} - c = 0.00000$

Division Deductive

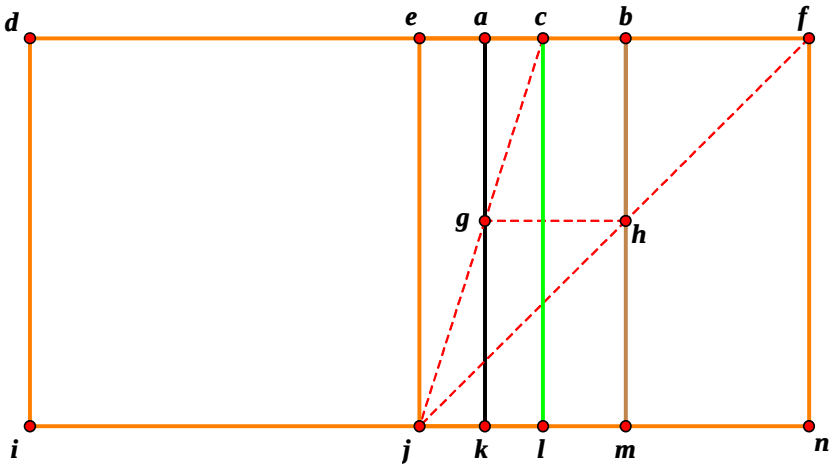
a := .16786 b := .52937

hm := b gk := hm $c := \frac{a}{gk}$ c = 0.31709

$\frac{a}{b} - c = 0$

Unit = 1.00000
a = 0.16786
b = 0.52937
c = 0.31710
$\frac{a}{b}$ = 0.31710

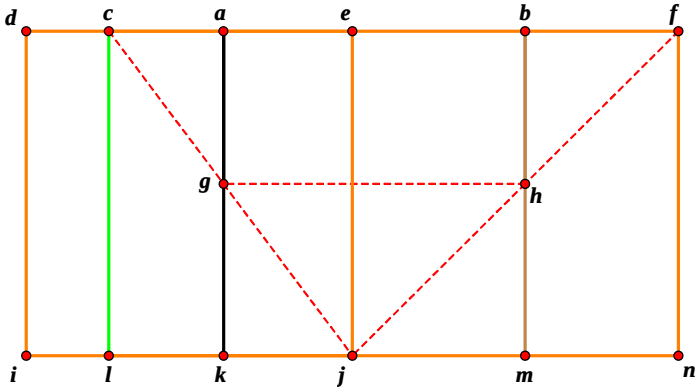
Division



Unit = 1.00000
a = –0.39524
b = 0.52937
c = –0.74661
$\frac{a}{b}$ = –0.74661

Division

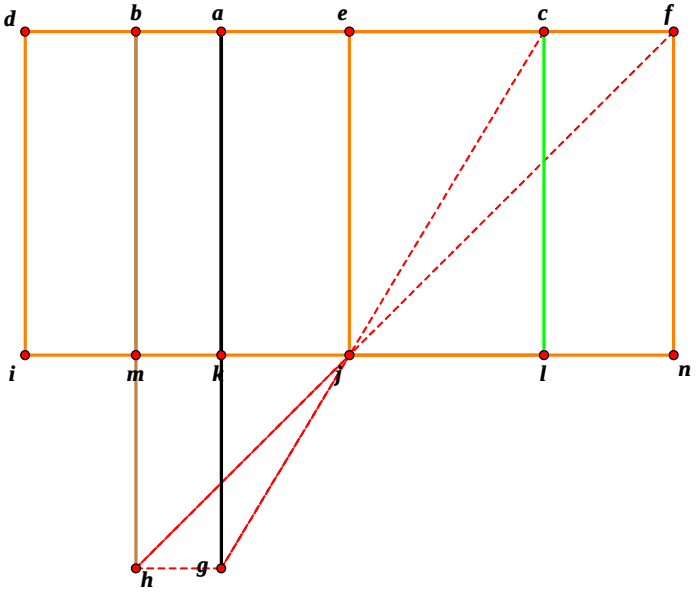
$\frac{a}{b} - c$ = 0.00000

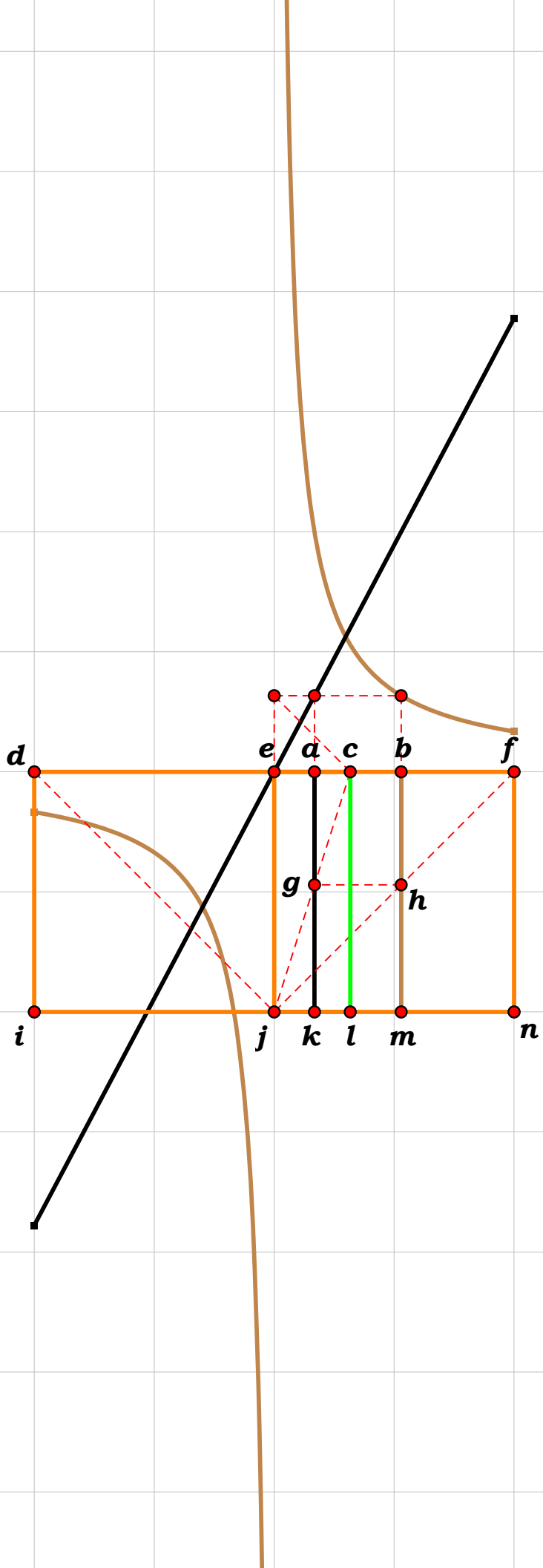


Unit = 1.00000
a = –0.39524
b = –0.65863
c = 0.60009
$\frac{a}{b}$ = 0.60009

Division

$\frac{a}{b} - c$ = 0.00000





Division

$Unit = 1.00000$

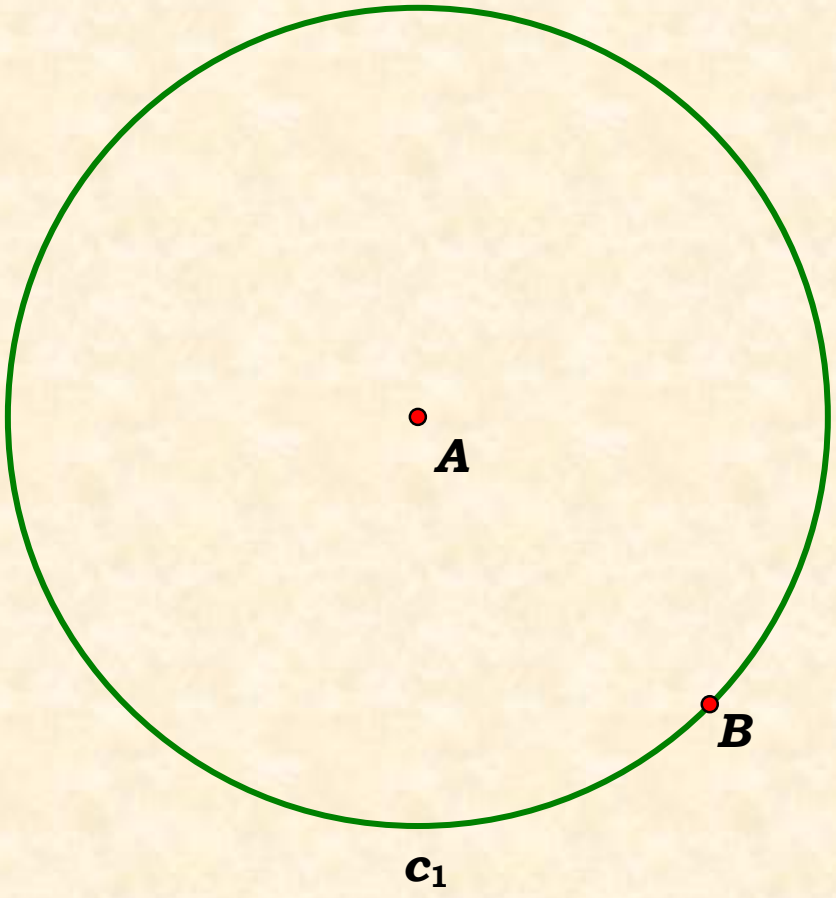
$a = 0.16786$

$b = 0.52937$

$c = 0.31710$

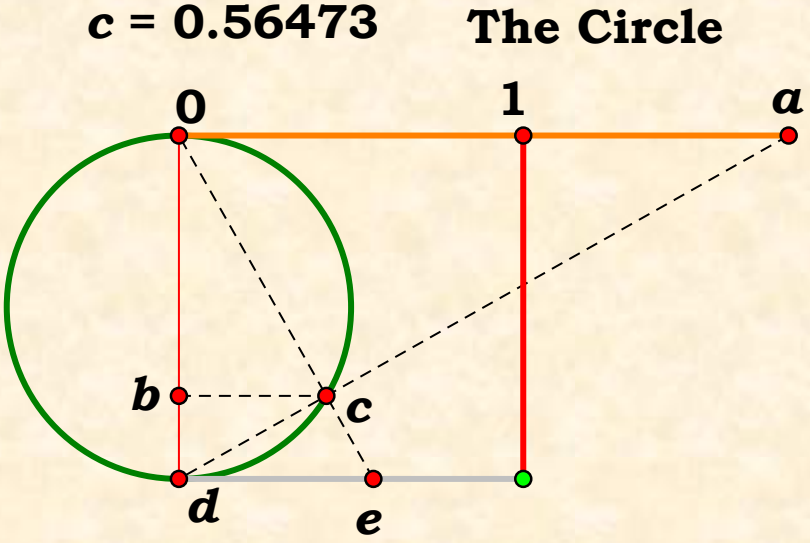
$\frac{a}{b} = 0.31710$

The Circle



The Circle

a = 1.77074
b = 0.42818
c = 0.56473



Circle Inductive

$a := 1.77074$

$ad := \sqrt{1 + a^2}$ $\quad cd := \frac{1}{ad}$

$bc := \frac{a \cdot cd}{ad}$ $\quad c := bc$ $\quad c = 0.42818$

Definitions

$ad - \sqrt{1 + a^2} = 0$ $\quad cd - \frac{1}{\sqrt{1 + a^2}} = 0$

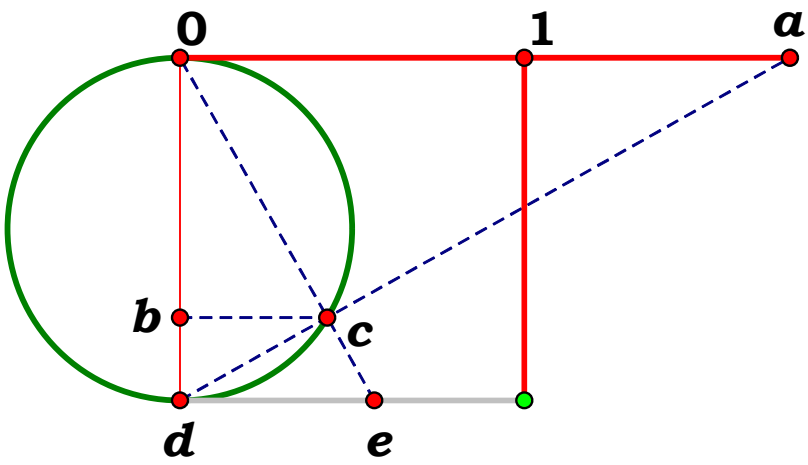
$c - \frac{a}{a^2 + 1} = 0$

$a = 1.77074$

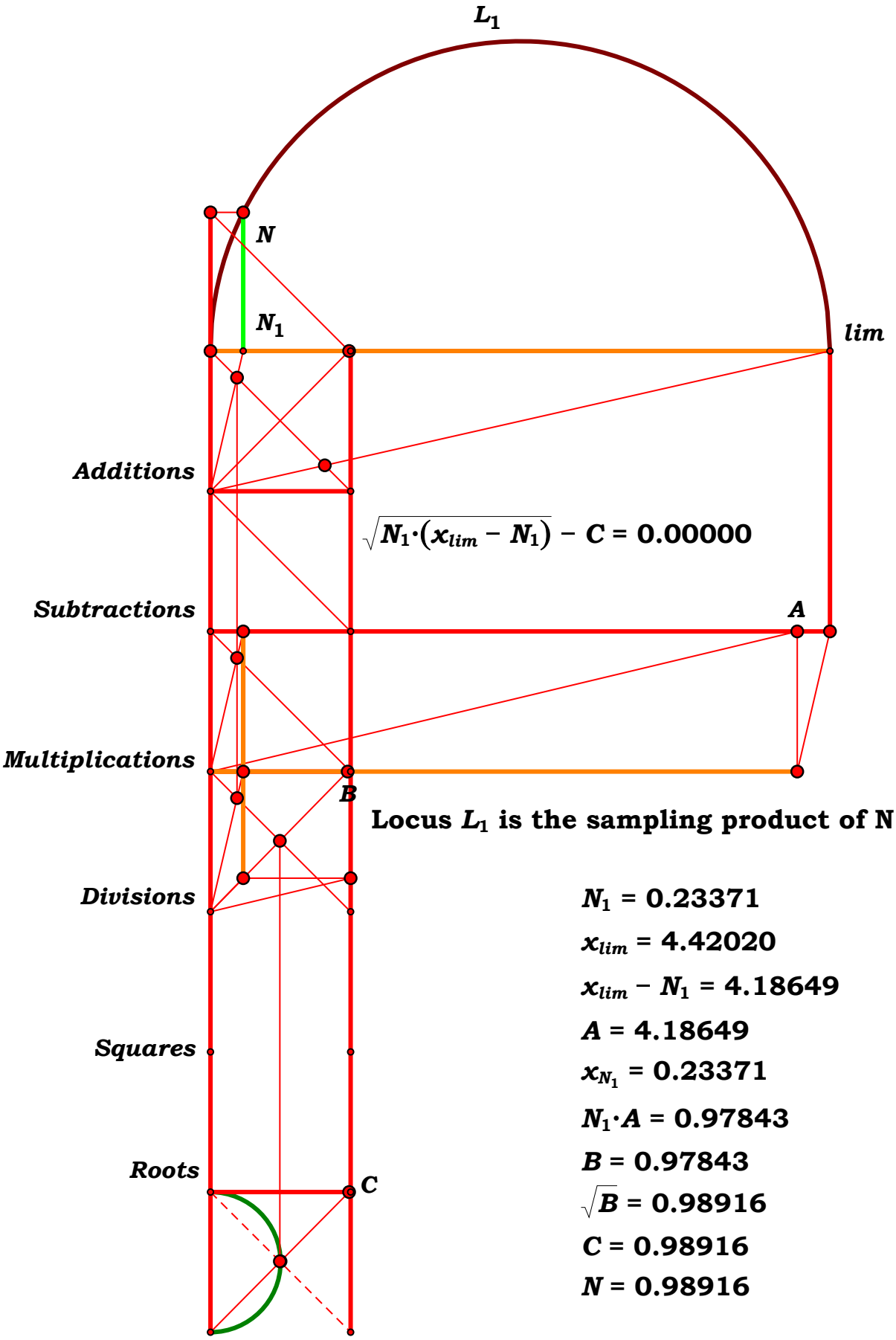
$c = 0.42818$

$d = 0.56473$

The Circle



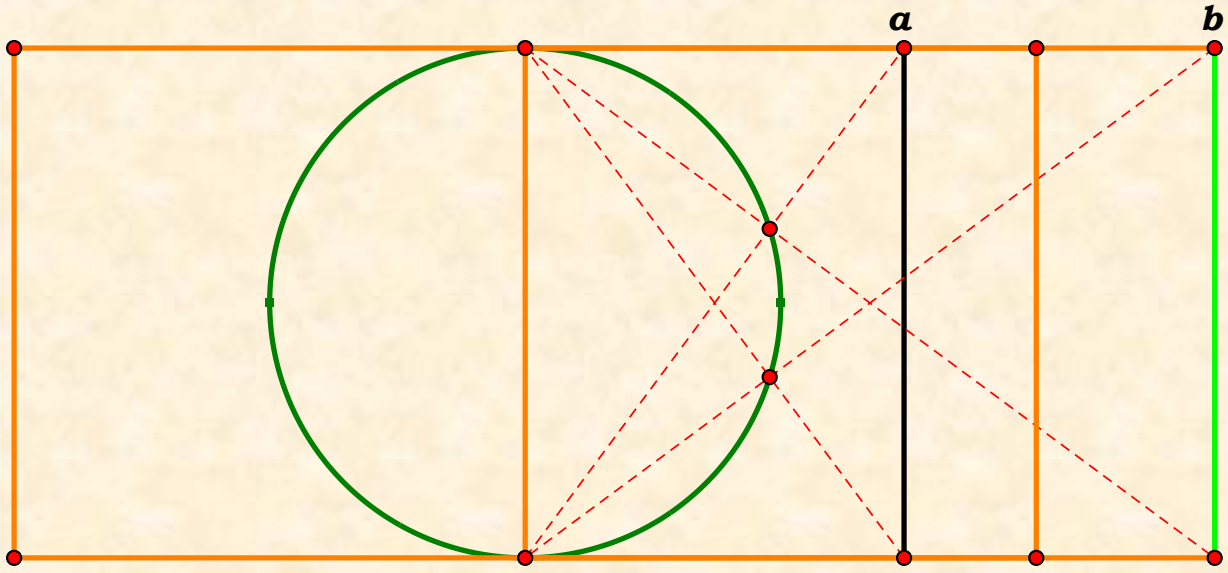
If you put the reciprocal of a into the final equation, it does not change it. This is just another way of saying that the circle is the reciprocal of every possible line, or again, one can draw a circle with only straight lines.


L_1
N
N_1
lim
Additions
$\sqrt{N_1 \cdot (x_{lim} - N_1)} - C = 0.00000$
Subtractions
A
Multiplications
B
Locus L_1 is the sampling product of N
Divisions
$N_1 = 0.23371$
$x_{lim} = 4.42020$
$x_{lim} - N_1 = 4.18649$
$A = 4.18649$
$x_{N_1} = 0.23371$
$N_1 \cdot A = 0.97843$
$B = 0.97843$
$\sqrt{B} = 0.98916$
$C = 0.98916$
$N = 0.98916$
Squares
Roots
C

The Circle

$a = 0.74127$
$b = 1.34904$

$\frac{1}{a} - b = 0.00000$



The Circle

$a := .76874 \quad ei := 1$

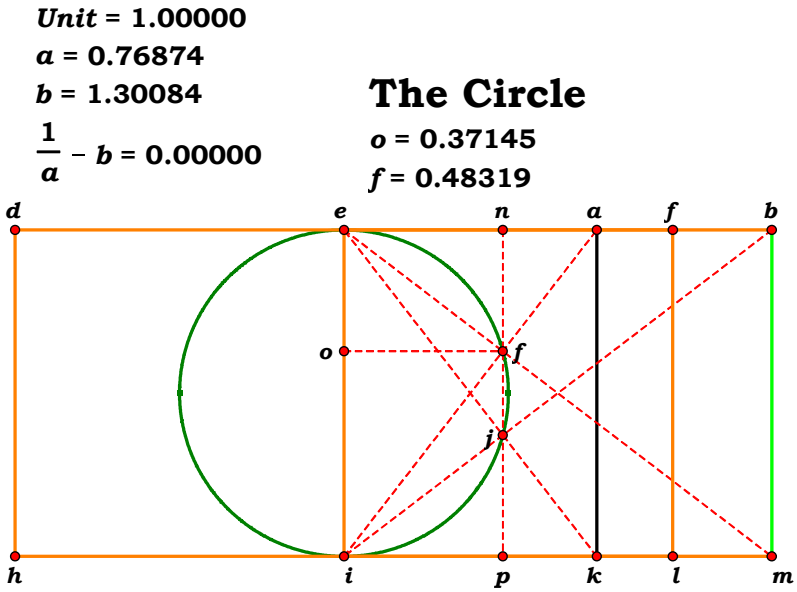
$o := .37145 \quad f := .48319$

$ae := a \quad be := \frac{1}{ae} \quad be = 1.30083$

$b := be \quad \frac{1}{a} - b = 0 \quad eo := a$

$n := \frac{a \cdot b}{a + b} \quad fo := n \quad eo := \frac{1 \cdot n}{b} \quad io := 1 - eo$

$n - \sqrt{io \cdot (1 - io)} = 0$



The Circle Deductive and Inductive

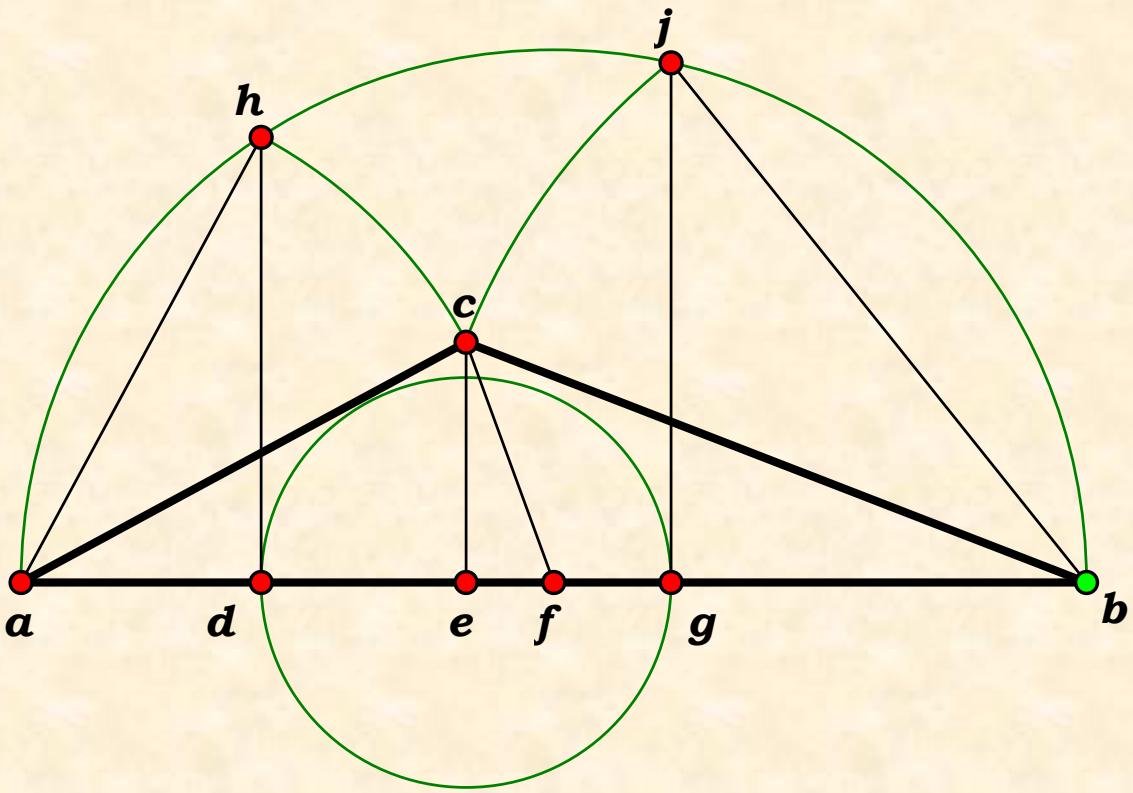
This equation is why Euclid did not made a big deal out of the Pythagorean equation, as it was known before hand. The perpendicular of an line to a diameter is equal to the square root of the two segments of a diameter diviided by that perpendicular. And, since this equation was not recognized by a lot of people, even though given in the Elements, made them ask, well, what is the equation of a circle? It is right there in the pages of Euclid.

If one study the figure, one may realize that Deduction produces the upper semi-circle, while Inductive produces the bottom simi-circle, so the two halves of a circle are distincguished by one half is produced by deduction, while the other induction. This is a topic worth taking the time to examine.

The result is, Induction is the Reciprocal of Deduction. This means that although, inductively, we cannot perceive perceptible infinity, we certainly can represent any infinite distance within a unit segment, i.e., infinity is comprehended in that manner, reciprocally.

In this wise, as the Unite is used for both the unit and Universe of discourse, i.e., complete Induction and Deducation, this propery of closure is exampled as above, in the construction of the circle itself. Most people just know the circle, produced by a perceptible compass, and not by the intelligible geometry of it. The compass, is not then a restriction upon Geometry, but a simple convienence.

Pythagoras Revisited



Pythagoras Revisited

Early in writing equations one is going to run into a puzzle. Let us examine the puzzle.

The relative difference, how many relative differences does one actually perceive? Let us say, just one. What happens when I start to parse it?

All of a sudden, we apply order. Now, here is the question. When I name anything, is the process of naming, itself, adding to or subtracting from what is named? If it did, would names be a reliable form of reasoning about things? Or, are we subjectively adding to perception, that which is wholly intelligible?

This is a common and fundamental mistake in learning grammar, projecting information into the process which should not be done, if one is going to have a correct system of grammar.

The order that the letters were written does not exist in the thing described. I could have written them in the opposite order.

Think about this now, in relation to mathematical operators. Does a sign, + or – mean the same thing as making something either greater or lesser? When we parse the abstract relative difference, which is not a thing, is there such a notion, in regard to that relative, of another relative, of positions, left, right, etc?

When one parses, and name, one must be cognizant of the fact that there is a difference between the ordering of a naming convention, such that we do not confuse the conventional, with the data to which it is applied. Today we have hordes of mental invalids who cannot do that.

The difference between a and b, does not mean that if I read it in one direction it is positive, but if I read it in the reverse direction that it is negative, yet armies of the simple minded insist that this is the case. That is how they form their brain-dead mythologies.

Teachers, teach and insist on the maintenance of this mythology. Perhaps, for them, it is just true that they find it too hard to think. So, when I write a – b, am I writing a subtracting b, or am I writing, the difference between a and b is changed?

The difference is actually one dimensional, however, if I now say that direction is to be added, then that is two dimensional, i.e., difference and direction, which is not the same thing.

It has then become customary to teach such nonsense as absolute value $|a|$, for example, and the logical operation performed by $\sqrt{a^2}$, to fix our equations,

instead of adding another symbol itself in an orderly fashion, two symbols for difference. Without symbols, to denote the distinctions between to different concepts, we have to, now, be very careful in examining the results of what we write, when we mean difference, and just use the minus symbol, we may have unintentionally caused a fallacy in what we wrote. So, I put this demonstration in two forms, one in which I am careless, which I was, and the other how to fix it using the common way to fix a mess.

So, we discarded the equations for the helpers, which are not always present, but some went on to claim a mathematics of the imaginary, I just discard them, and we had to fix two of the equations using the square root function to construct a logical operator.

Pythagoras Revisited Plate 1

$ab := 10.32521 \quad bc := 6.44758$

$ac := 4.90108$

Descriptions:

$ad := \frac{ac^2}{ab} \quad bg := \frac{bc^2}{ab}$

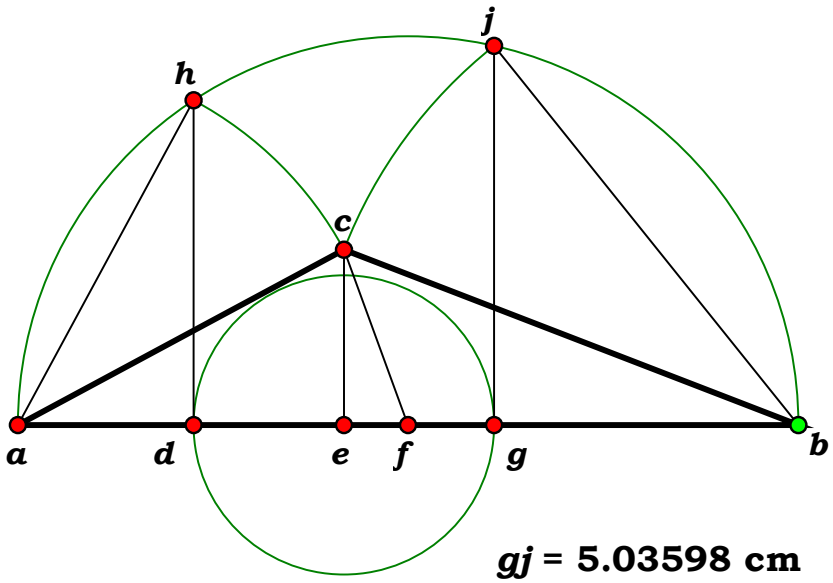
$dg := ab - (ad + bg) \quad de := \frac{dg}{2}$

$ae := ad + de \quad ce := \sqrt{ac^2 - ae^2}$

$af := \frac{ab}{2} \quad ef := af - ae$

$cf := \sqrt{ce^2 + ef^2} \quad ae = 4.31271$

$ef = 0.8499 \quad cf = 2.4786$



***ab* = 10.32521 cm**
***bc* = 6.44758 cm**
***ac* = 4.90108 cm**
***ah* = 4.90108 cm**
***dh* = 4.31375 cm**
***bj* = 6.44758 cm**

***gj* = 5.03598 cm**
***ce* = 2.32833 cm**
***cf* = 2.47860 cm**
***ad* = 2.32640 cm**
***ae* = 4.31271 cm**
***ef* = 0.84990 cm**
***bd* = 7.99881 cm**

Definitions:

$$ad - \frac{ac^2}{ab} = 0 \quad bg - \frac{bc^2}{ab} = 0 \quad dg - \frac{ab^2 - ac^2 - bc^2}{ab} = 0 \quad de - \frac{ab^2 - ac^2 - bc^2}{2 \cdot ab} = 0$$

$$ae - \frac{ab^2 + ac^2 - bc^2}{2 \cdot ab} = 0 \quad ce - \frac{\sqrt{(ab + ac + bc) \cdot (ab + ac - bc) \cdot (ab - ac + bc) \cdot (ac - ab + bc)}}{2 \cdot ab} = 0$$

$$af - \frac{ab}{2} = 0 \quad ef - \frac{bc^2 - ac^2}{2 \cdot ab} = 0 \quad cf - \frac{\sqrt{2 \cdot \left(ac^2 + bc^2\right) - ab^2}}{2} = 0$$

Pythagoras Revisited Plate 2

$ab := 10.32521 \quad bc := 6.44758$

$ac := 4.90108$

Descriptions:

$ad := \frac{ac^2}{ab} \quad bg := \frac{bc^2}{ab}$

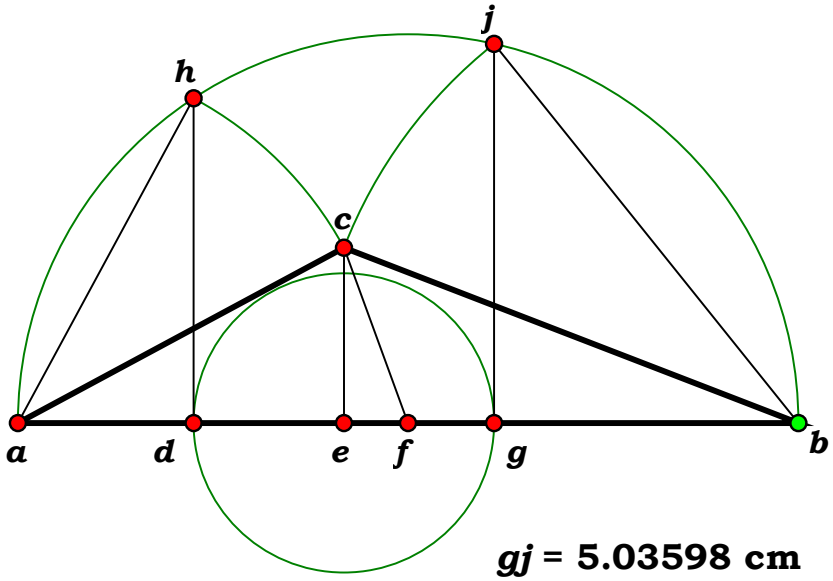
$dg := ab - (ad + bg) \quad de := \frac{dg}{2}$

$ae := ad + de \quad ce := \sqrt{ac^2 - ae^2}$

$af := \frac{ab}{2} \quad ef := af - ae$

$cf := \sqrt{ce^2 + ef^2} \quad ae = 4.31271$

$ef = 0.8499 \quad cf = 2.4786$



***ab* = 10.32521 cm**
***bc* = 6.44758 cm**
***ac* = 4.90108 cm**
***ah* = 4.90108 cm**
***dh* = 4.31375 cm**
***bj* = 6.44758 cm**

***gj* = 5.03598 cm**
***ce* = 2.32833 cm**
***cf* = 2.47860 cm**
***ad* = 2.32640 cm**
***ae* = 4.31271 cm**
***ef* = 0.84990 cm**
***bd* = 7.99881 cm**

Definitions:

$ad - \frac{ac^2}{ab} = 0 \quad bg - \frac{bc^2}{ab} = 0 \quad dg - \frac{\sqrt{\left(ab^2 - ac^2 - bc^2\right)^2}}{ab} = 0 \quad de - \frac{\sqrt{\left(ab^2 - ac^2 - bc^2\right)^2}}{2 \cdot ab} = 0$

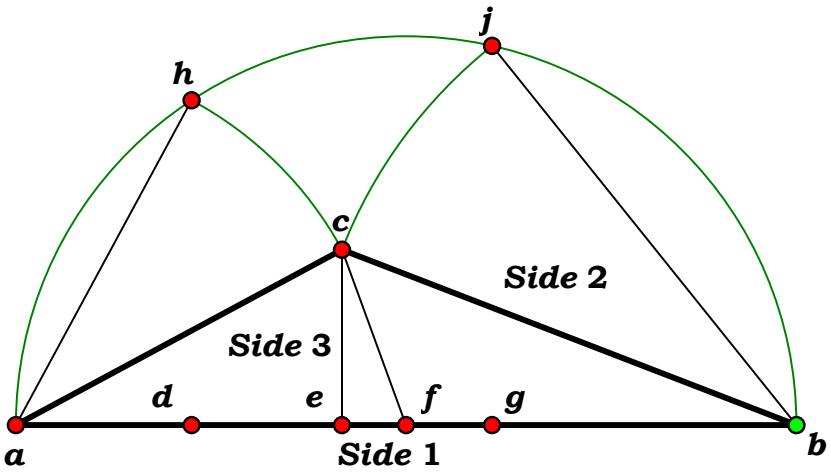
$ae - \frac{\sqrt{\left(ab^2 + ac^2 - bc^2\right)^2}}{2 \cdot ab} = 0 \quad af - \frac{ab}{2} = 0 \quad ef - \frac{\sqrt{\left(bc^2 - ac^2\right)^2}}{2 \cdot ab} = 0$

$ce - \frac{\sqrt{(ab + ac + bc) \cdot (ab + ac - bc) \cdot (ab - ac + bc) \cdot (ac - ab + bc)}}{2 \cdot ab} = 0$

$cf - \frac{\sqrt{2 \cdot ac^2 - ab^2 + 2 \cdot bc^2}}{2} = 0$

What does this figure introduce to us? It introduces the idea that the square root notation has a second function, that function is a logical operator. The Square Root of a Square is always positive. It is actually a logical operator by accident, for, when we think of addition and subtraction, we do not realize that we are implying direction. This means that there is a logical idea missing, simply the idea of difference.

Conventional



$S_1 := ab \quad S_2 := bc \quad S_3 := ac$

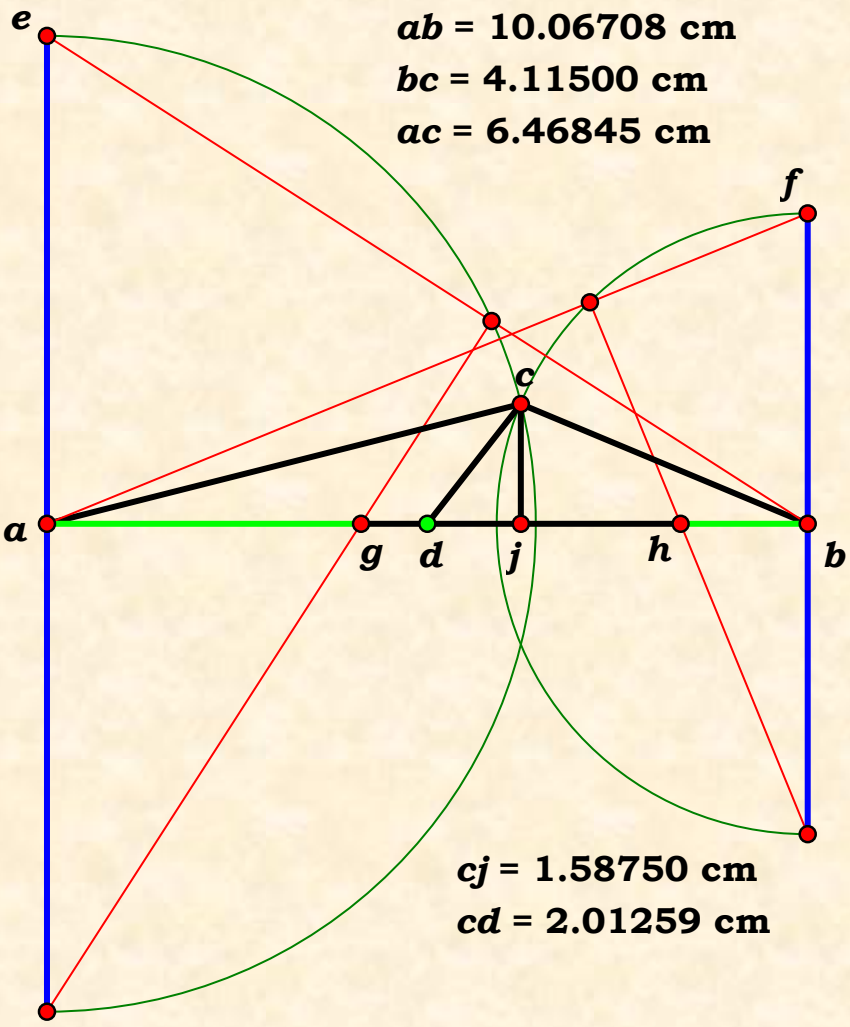
$$dg - \frac{\sqrt{\left(S_1^{\,2} - S_3^{\,2} - S_2^{\,2}\right)^2}}{S_1} = 0$$

$$af - \frac{S_1}{2} = 0 \qquad ef - \frac{\sqrt{\left(S_2^{\,2} - S_3^{\,2}\right)^2}}{2 \cdot S_1} = 0$$

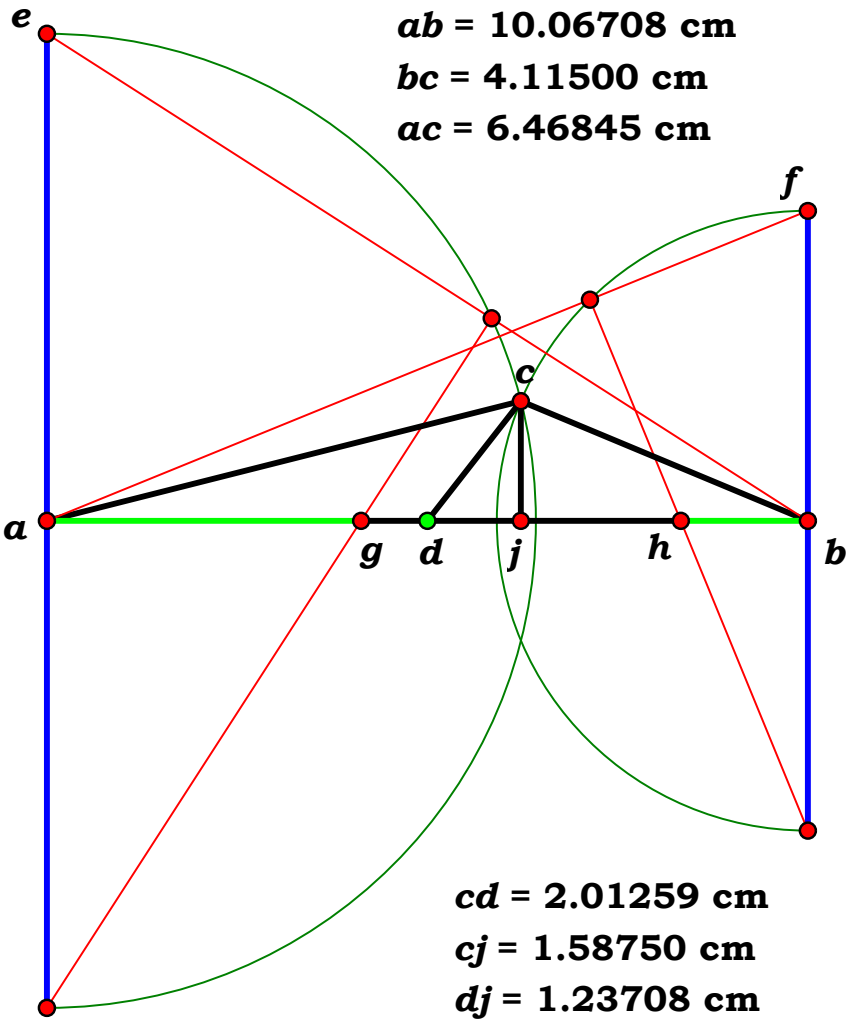
$$ce - \frac{\sqrt{\left(S_1 + S_3 + S_2\right) \cdot \left(S_1 + S_3 - S_2\right) \cdot \left(S_1 - S_3 + S_2\right) \cdot \left(S_3 - S_1 + S_2\right)}}{2 \cdot S_1} = 0$$

$$cf - \frac{\sqrt{2 \cdot S_3^{\,2} - S_1^{\,2} + 2 \cdot S_2^{\,2}}}{2} = 0$$

Pythagoras Revisited Again



Power-Line Method



$ab = 10.06708$ cm
$bc = 4.11500$ cm
$ac = 6.46845$ cm

$cd = 2.01259$ cm
$cj = 1.58750$ cm
$dj = 1.23708$ cm

Pythagoras Revisited Again

Given:

$ab := 10.06708$

$bc := 4.11500$

$ac := 6.46845$

Descriptions:

$ag := \frac{ac^2}{ab}$ $\quad bh := \frac{bc^2}{ab}$

$gh := ab - (ag + bh)$ $\quad gj := \frac{gh}{2}$

$aj := ag + gj$ $\quad bj := bh + gj$

$cj := \sqrt{ac^2 - aj^2}$ $\quad ad := \frac{ab}{2}$

$dj := \sqrt{(aj - ad)^2}$ $\quad cd := \sqrt{dj^2 + cj^2}$

$dj = 1.23708$

$cd = 2.01259$

$cj = 1.58749$

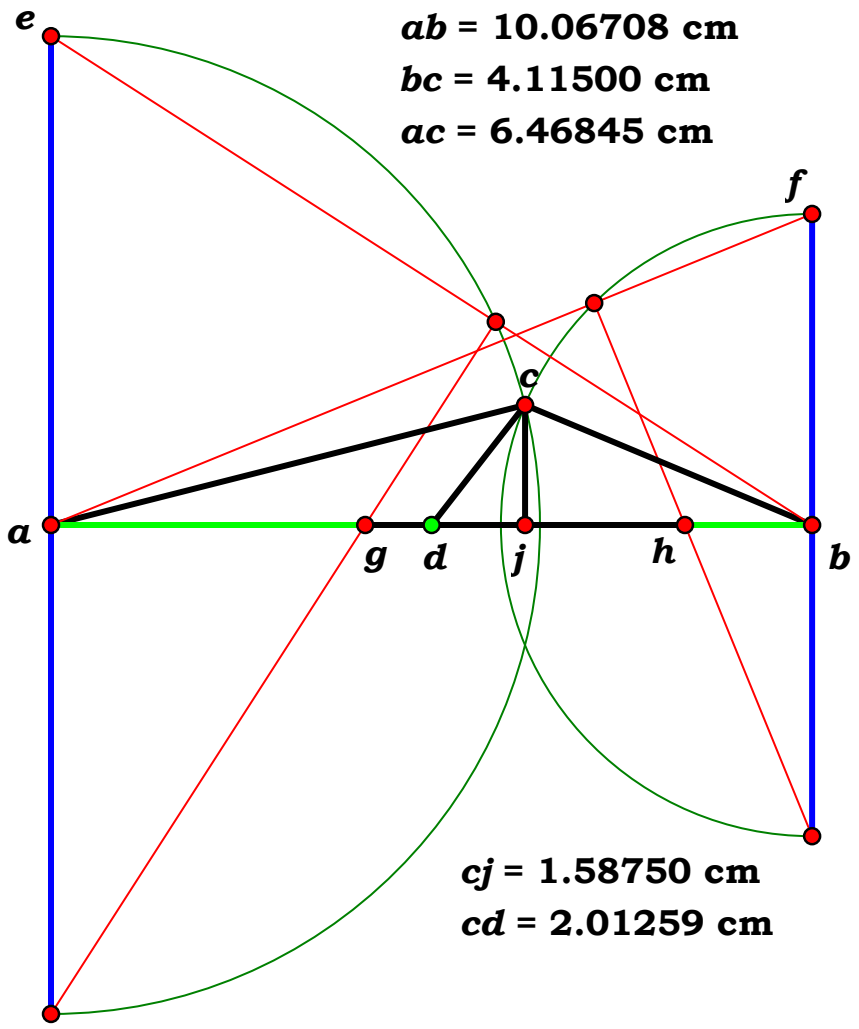
Definitions:

$$ag - \frac{ac^2}{ab} = 0 \quad bh - \frac{bc^2}{ab} = 0 \quad gh - \frac{ab^2 - ac^2 - bc^2}{ab} = 0$$

$$gj - \frac{ab^2 - ac^2 - bc^2}{2 \cdot ab} = 0 \quad aj - \frac{ab^2 + ac^2 - bc^2}{2 \cdot ab} = 0 \quad ad - \frac{ab}{2} = 0$$

$$bj - \frac{ab^2 - ac^2 + bc^2}{2 \cdot ab} = 0 \quad cj - \frac{\sqrt{ab + ac + bc} \cdot \sqrt{ab + ac - bc} \cdot \sqrt{ab - ac + bc} \cdot \sqrt{ac - ab + bc}}{2 \cdot ab} = 0$$

$$dj - \frac{\sqrt{(ac - bc)^2} \cdot \sqrt{(ac + bc)^2}}{2 \cdot ab} = 0 \quad cd - \frac{\sqrt{2 \cdot ac^2 - ab^2 + 2 \cdot bc^2}}{2} = 0$$


e
ab = 10.06708 cm
bc = 4.11500 cm
ac = 6.46845 cm
f
c
a
g
d
j
h
b
cj = 1.58750 cm
cd = 2.01259 cm

$ab = 7.66781$ cm

$bc = 8.93707$ cm

$ac = 6.33748$ cm

$cd = 6.21405$ cm

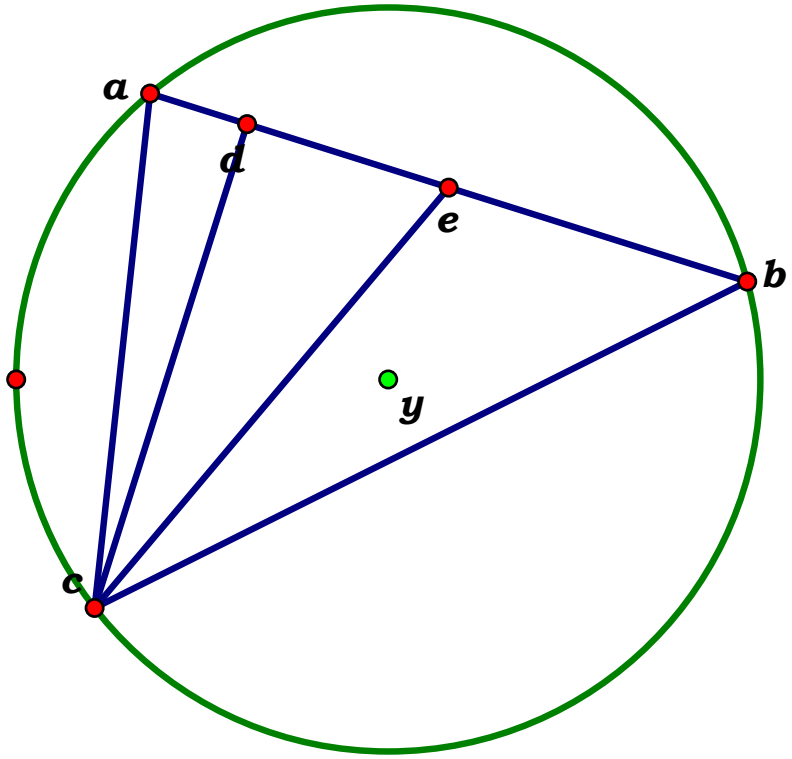
$ce = 6.73191$ cm

$\sqrt{ab + bc + ac} = 4.78982$

$\sqrt{ab + bc - ac} = 3.20428$

$\sqrt{ab - bc + ac} = 2.25127$

$\sqrt{bc + ac - ab} = 2.75803$



$$\frac{\sqrt{ab + bc + ac}\cdot\sqrt{ab + bc - ac}\cdot\sqrt{ab - bc + ac}\cdot\sqrt{bc + ac - ab}}{2\cdot ab} - cd = 0.00000$$

$$\frac{\sqrt{2\cdot ac^2 - ab^2 + 2\cdot bc^2}}{2} - ce = 0.00000 \text{ cm}$$

Animate Point

Animate Point

Animate Point

$ab = 5.18592$ cm

$bc = 2.97578$ cm

$ac = 7.34890$ cm

$cd = 2.39931$ cm

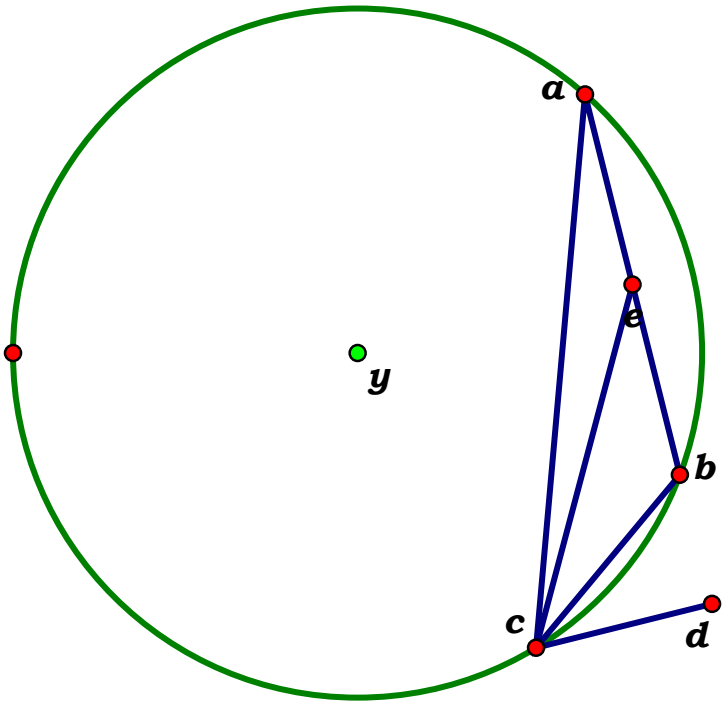
$ce = 4.97065$ cm

$\sqrt{ab + bc + ac} = 3.93835$

$\sqrt{ab + bc - ac} = 0.90155$

$\sqrt{ab - bc + ac} = 3.09177$

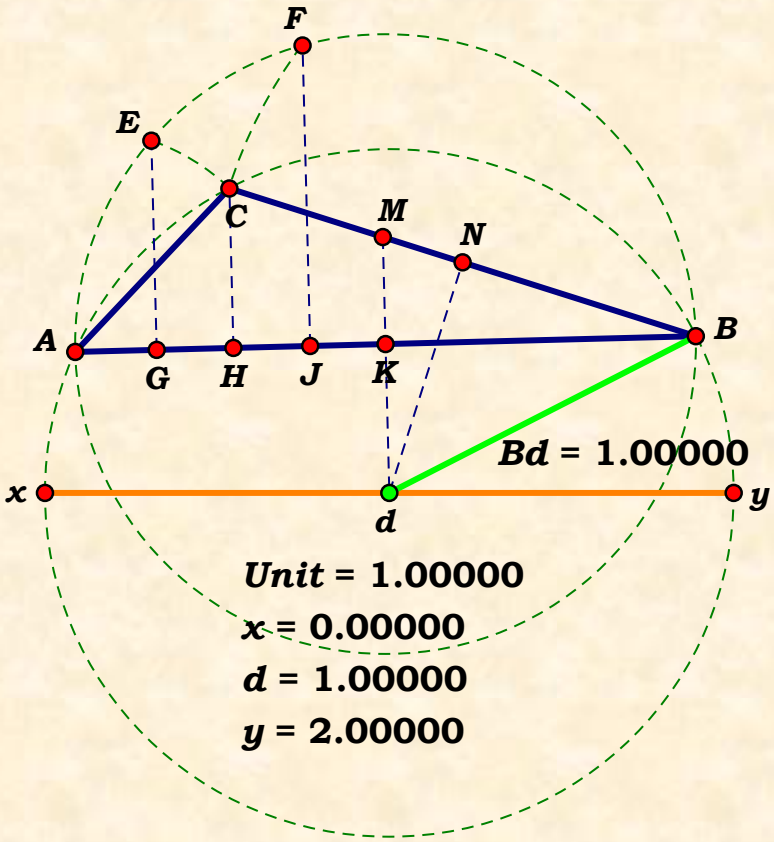
$\sqrt{bc + ac - ab} = 2.26688$



$$\frac{\sqrt{ab + bc + ac}\cdot\sqrt{ab + bc - ac}\cdot\sqrt{ab - bc + ac}\cdot\sqrt{bc + ac - ab}}{2\cdot ab} - cd = 0.00000$$

$$\frac{\sqrt{2\cdot ac^2 - ab^2 + 2\cdot bc^2}}{2} - ce = 0.00000 \text{ cm}$$

Circumscription



AB = 1.80266

BC = 1.42104

AC = 0.65300

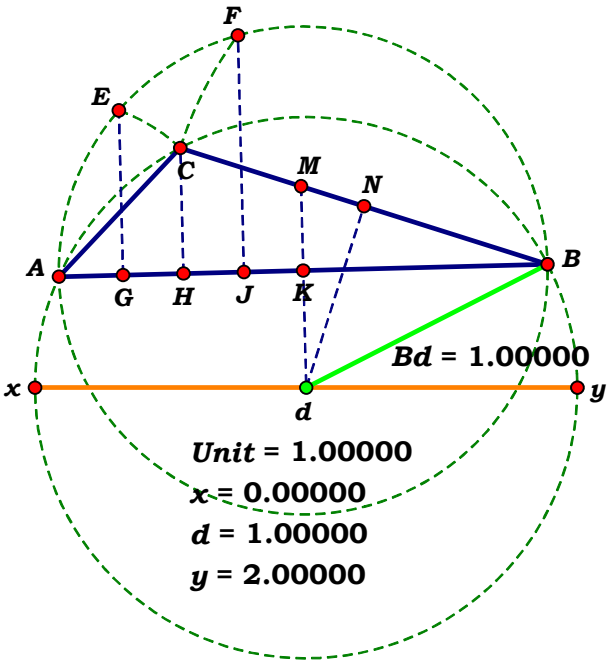
dN = 0.70368

Circumscription

The demonstration went perfectly. You can, as I do, animate the figure and watch the results for every possible triangle, the result does not change. But what is the method of my demonstration based on? Actually, Plato describes it in his dialogs. After working our your reasonings, you work them back down to first Principles, arriving at a truth independent of any particular thing, a Universal, which is then used as a standard which can be applied to every possible particular example.

The First Principles are your givens. We are only given the three sides of a triangle, and the fact that every triangle has its vertices on the diameter of a circle. From that we can then work out the math, and imagine that, I worked it out in one standard page, so not very difficult at all.

What comes next? Dispelling the Myths of Trigonometers.



AB = 1.80266
BC = 1.42104
AC = 0.65300
dN = 0.70368

Circumscription:

Given:

$AB := 1.80266 \quad BC := 1.42104 \quad AC := .653001$

Descriptions:

$$AG := \frac{AC^2}{AB} \quad BJ := \frac{BC^2}{AB} \quad GJ := AB - (AG + BJ)$$

$$AJ := AG + \frac{GJ}{2} \quad BH := BJ + \frac{GJ}{2} \quad AK := \frac{AB}{2}$$

$$CH := \sqrt{AC^2 - AJ^2} \quad KM := \frac{CH \cdot AK}{BH} \quad BN := \frac{BC}{2}$$

$$BM := \frac{BC \cdot KM}{CH} \quad MN := BM - BN \quad dN := \frac{BH \cdot MN}{CH}$$

$$Bd := \sqrt{BN^2 + dN^2} \qquad Bd = 1$$

Definitions:

$$AG - \frac{AC^2}{AB} = 0 \quad BJ - \frac{BC^2}{AB} = 0 \quad GJ - \frac{AB^2 - AC^2 - BC^2}{AB} = 0 \quad AJ - \frac{AB^2 + AC^2 - BC^2}{2 \cdot AB} = 0$$

$$BH - \frac{AB^2 - AC^2 + BC^2}{2 \cdot AB} = 0 \quad AK - \frac{AB}{2} = 0$$

$$CH - \frac{\sqrt{(AB + AC - BC) \cdot (AB - AC + BC) \cdot (AC - AB + BC) \cdot (AB + AC + BC)}}{2 \cdot AB} = 0$$

$$KM - \frac{AB \cdot \sqrt{(AB + AC - BC) \cdot (AB - AC + BC) \cdot (AC - AB + BC) \cdot (AB + AC + BC)}}{2 \cdot \left(AB^2 - AC^2 + BC^2\right)} = 0$$

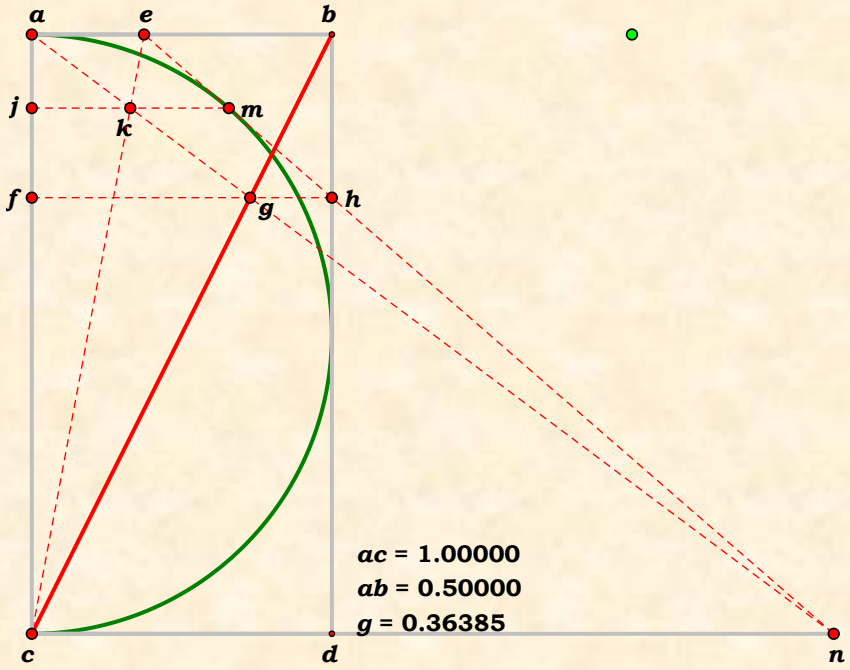
$$BN - \frac{BC}{2} = 0 \quad BM - \frac{AB^2 \cdot BC}{AB^2 - AC^2 + BC^2} = 0 \quad MN - \frac{BC \cdot \left(AB^2 + AC^2 - BC^2\right)}{2 \cdot \left(AB^2 - AC^2 + BC^2\right)} = 0$$

$$dN - \frac{BC \cdot \left(AB^2 + AC^2 - BC^2\right)}{2 \cdot \sqrt{(AB + AC - BC) \cdot (AB - AC + BC) \cdot (AC - AB + BC) \cdot (AB + AC + BC)}} = 0$$

$$Bd - \frac{AB \cdot AC \cdot BC}{\sqrt{AB + AC - BC} \cdot \sqrt{AB - AC + BC} \cdot \sqrt{AC - AB + BC} \cdot \sqrt{AB + AC + BC}} = 0$$

Curve of the Equation

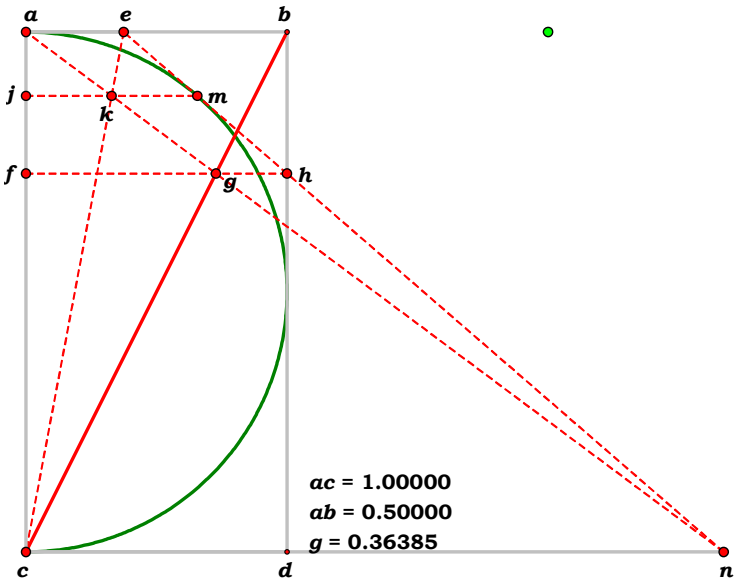
Curve of the Equation



$$\frac{2 \cdot g \cdot (1 - 2 \cdot g)}{8 \cdot g^2 - 4 \cdot g + 1} - jm = 0.00000$$

$$\frac{2 \cdot g - 4 \cdot g^2}{8 \cdot g^2 - 4 \cdot g + 1} - jm = 0.00000$$

Curve of the Equation



$\frac{2\cdot g\cdot(1-2\cdot g)}{8\cdot g^2-4\cdot g+1} - jm = 0.00000$

$\frac{2\cdot g-4\cdot g^2}{8\cdot g^2-4\cdot g+1} - jm = 0.00000$

Given:

$ac := 1 \quad fg := .36385$

Descriptions:

$ab := \frac{ac}{2} \quad fc := 2\cdot fg \quad af := ac - fc$

$cn := \frac{fg}{1-fc} \quad dn := ab - cn \quad dh := fc$

$bh := af \quad be := \frac{dn\cdot bh}{dh} \quad ae := ab + be$

$jk := \frac{ae\cdot cn}{ae+cn} \quad aj := \frac{ac\cdot jk}{cn} \quad cj := ac - aj$

$jm := 2\cdot jk \quad jm - \sqrt{aj\cdot cj} = 0$

Definitions:

$ab - \frac{ac}{2} = 0 \quad fc - 2\cdot fg = 0$

$af - (ac - 2\cdot fg) = 0 \quad cn - \frac{fg}{1-2\cdot fg} = 0 \quad dn - \frac{fg - ab + 2\cdot ab\cdot fg}{2\cdot fg - 1} = 0$

$dh - 2\cdot fg = 0 \quad bh - (ac - 2\cdot fg) = 0 \quad be - \frac{(ac-2\cdot fg)\cdot(fg - ab + 2\cdot ab\cdot fg)}{4\cdot fg^2 - 2\cdot fg} = 0$

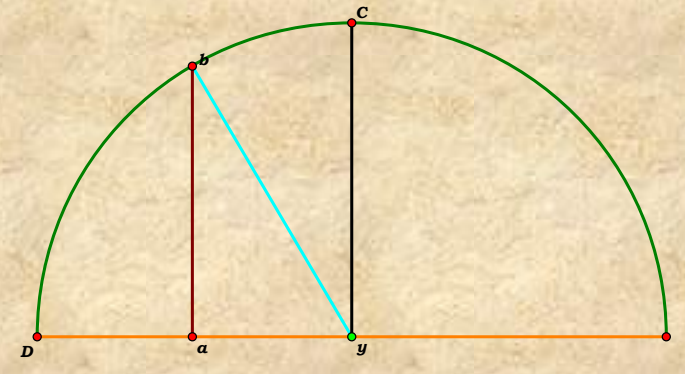
$ae - \left[\frac{ac\cdot fg - ab\cdot ac - 2\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg}{2\cdot fg\cdot(2\cdot fg-1)}\right] = 0 \quad jk - \frac{fg\cdot\left(2\cdot fg^2 + ab\cdot ac - ac\cdot fg - 2\cdot ab\cdot ac\cdot fg\right)}{(2\cdot fg-1)\cdot\left(ac\cdot fg - ab\cdot ac - 4\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg\right)} = 0$

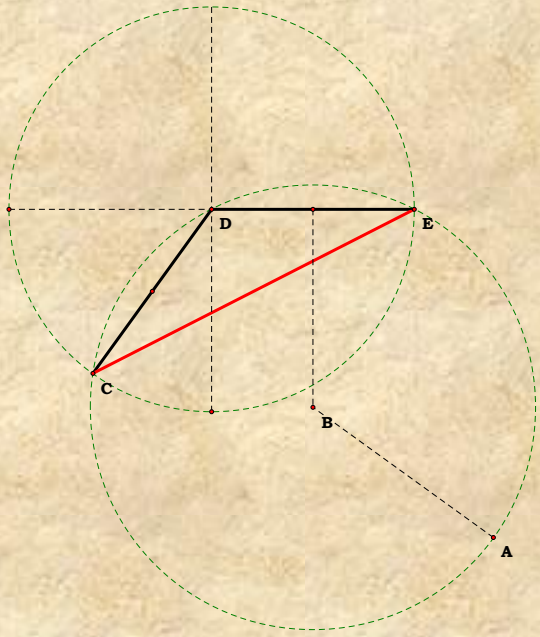
$aj - \frac{ac\cdot\left(ac\cdot fg - ab\cdot ac - 2\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg\right)}{ac\cdot fg - ab\cdot ac - 4\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg} = 0 \quad cj - (ac - aj) = 0$

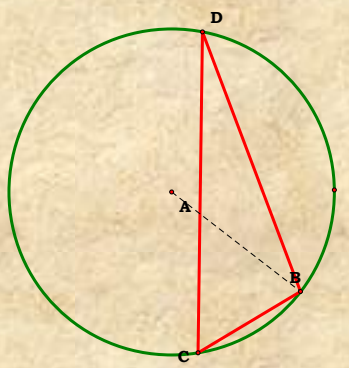
$jm - \frac{2\cdot fg\cdot\left(ac\cdot fg - ab\cdot ac - 2\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg\right)}{(1-2\cdot fg)\cdot\left(ac\cdot fg - ab\cdot ac - 4\cdot fg^2 + 2\cdot ab\cdot ac\cdot fg\right)} = 0 \quad jm - \sqrt{aj\cdot cj} = 0$

$jm - \frac{2\cdot fg\cdot(1-2\cdot fg)}{8\cdot fg^2 - 4\cdot fg + 1} = 0 \quad jm - \frac{2\cdot fg - 4\cdot fg^2}{8\cdot fg^2 - 4\cdot fg + 1} = 0$

The Angle







Demonstrating the obfuscation of Geometry

$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 0.49328$ $\quad 1 - a = 0.50672$ $\quad a - 1 = -0.50672$

$b = 0.86211$ $\quad \sqrt{a \cdot (2 - a)} = 0.86211$ $\quad \sqrt{a \cdot (2 - a)} - b = 0.00000$

$ya = 0.50672$

$m\angle bya = 59.55435°$

$m\angle yba = 30.44565°$

$m\angle aCy = 26.87228°$

$m\angle Dyb = 59.55435°$

$m\angle bya + m\angle yba = 90.00000°$

$\sin^{-1}(b) - m\angle bya = 0.00000°$ $\quad \sin^{-1}(\sqrt{a \cdot (2 - a)}) - m\angle bya = 0.00000°$

$\cos^{-1}(b) - m\angle yba = 0.00000°$ $\quad \cos^{-1}(\sqrt{a \cdot (2 - a)}) - m\angle yba = 0.00000°$

$\cos^{-1}(1 - a) - m\angle Dyb = 0.00000°$

$\tan^{-1}(ya) - m\angle aCy = 0.00000°$

$\sin(m\angle bya) - b = 0.00000$ $\quad \sin(m\angle bya) - \sqrt{a \cdot (2 - a)} = 0.00000$

$\sin(m\angle yba) - ya = 0.00000$

$\cos(m\angle bya) - ya = 0.00000$

$\cos(m\angle yba) - b = 0.00000$ $\quad \cos(m\angle yba) - \sqrt{a \cdot (2 - a)} = 0.00000$

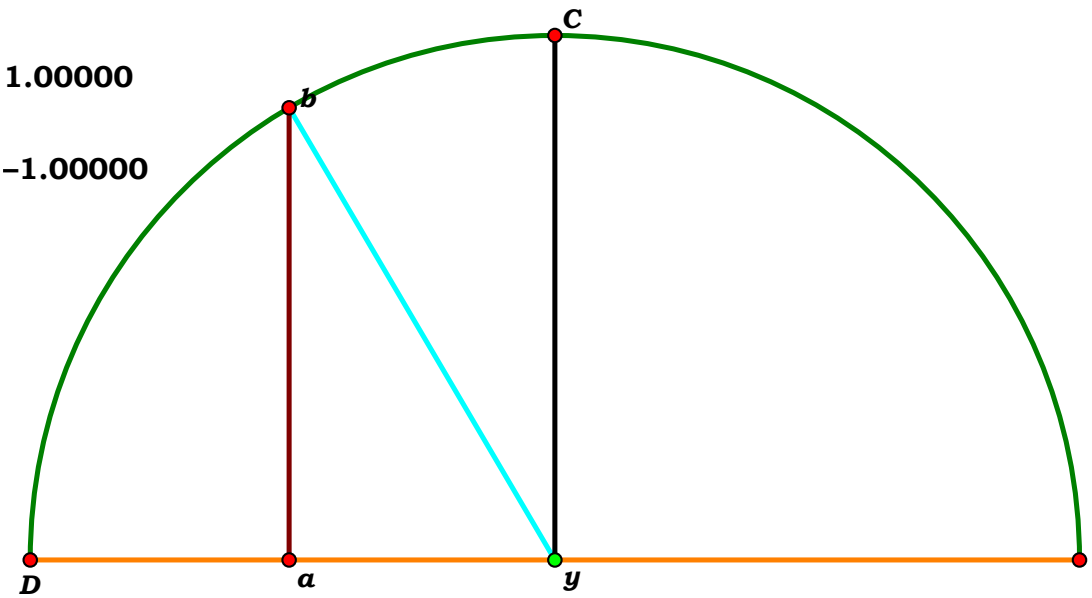
$\tan(m\angle aCy) - ya = 0.00000$

$$\frac{\sin^{-1}(1 - a)}{m\angle yba} = 1.00000$$

$$\frac{\sin^{-1}(a - 1)}{m\angle yba} = -1.00000$$

$$\frac{\tan^{-1}(1 - a)}{m\angle aCy} = 1.00000$$

$$\frac{\tan^{-1}(a - 1)}{m\angle aCy} = -1.00000$$



Trigonometry Functions with, of all things, Trigonometry logical operators, all reduced to a function of a.

AB = 5.90032 cm

DC = 5.37104 cm

DE = 5.37104 cm

CE = 9.56492 cm

2·AB = 11.80064 cm

Animate Point

Move Point

$\frac{DC}{2 \cdot AB} = 0.45515$ $m\angle DEC = 27.07449°$

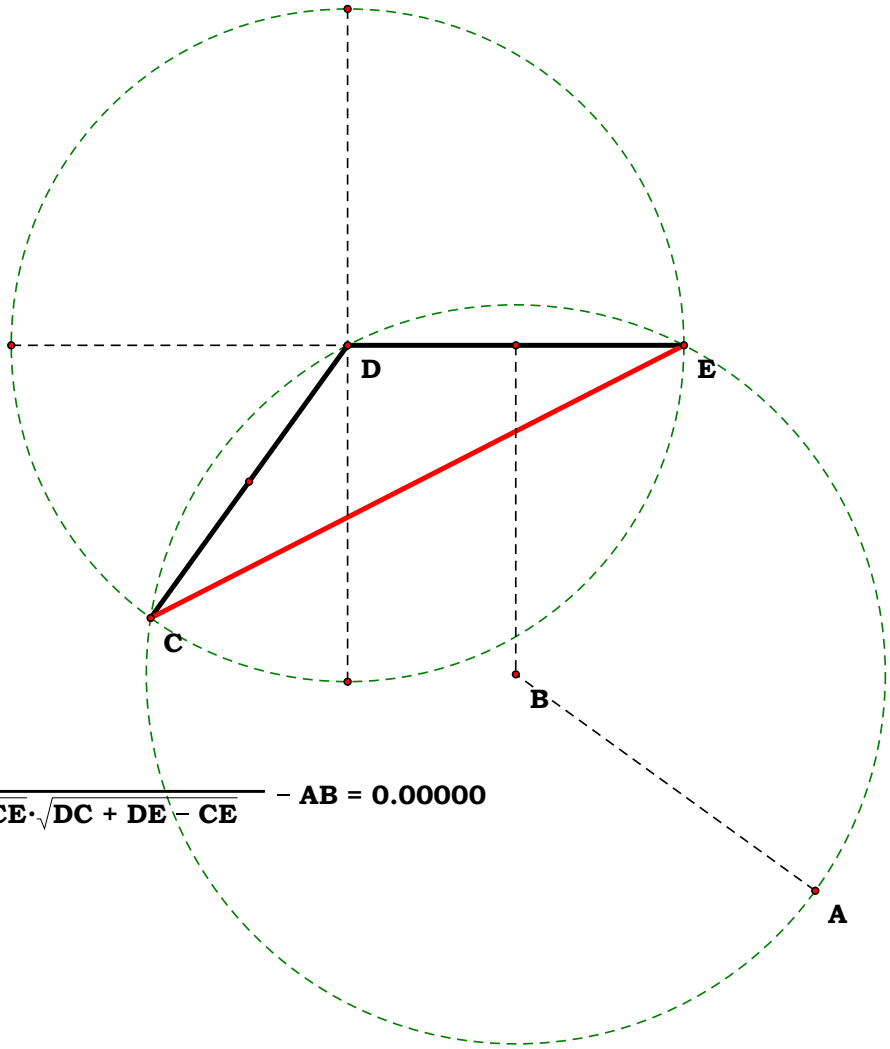
$\frac{DE}{2 \cdot AB} = 0.45515$ $m\angle DCE = 27.07449°$

$\frac{CE}{2 \cdot AB} = 0.81054$ $m\angle CDE = 125.85103°$

$\sin(m\angle DEC) - \frac{DC}{2 \cdot AB} = 0.00000$

$\sin(m\angle DCE) - \frac{DE}{2 \cdot AB} = 0.00000$

$\sin(m\angle CDE) - \frac{CE}{2 \cdot AB} = 0.00000$



$$\frac{DC \cdot DE \cdot CE}{\sqrt{DC + DE + CE} \cdot \sqrt{-DC + DE + CE} \cdot \sqrt{DC - DE + CE} \cdot \sqrt{DC + DE - CE}} - AB = 0.00000$$

$$\frac{DE^2}{\sqrt{2 \cdot DE + CE} \cdot \sqrt{2 \cdot DE - CE}} - AB = 0.00000$$

The Isosceles Triangle

$AB = 4.31303$ cm

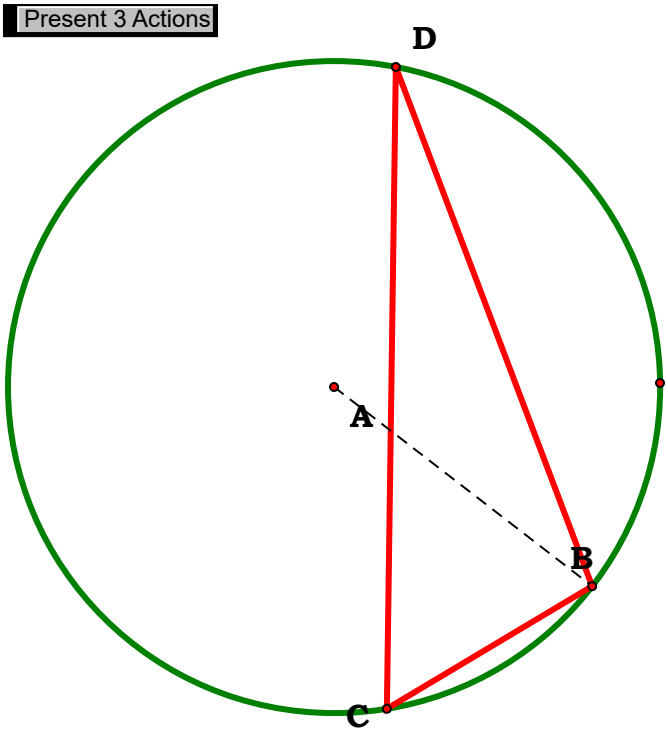
$2 \cdot AB = 8.62607$ cm

$BC = 3.16311$ cm

$CD = 8.49177$ cm

$BD = 7.34429$ cm

Present 3 Actions



$$\frac{BC}{2 \cdot AB} = 0.36669$$

$$\frac{CD}{2 \cdot AB} = 0.98443$$

$$\frac{BD}{2 \cdot AB} = 0.85141$$

$m\angle CBD = 100.12332°$

$m\angle BDC = 21.51173°$

$m\angle DCB = 58.36496°$

$\sin(m\angle BDC) = 0.36669$

$\sin(m\angle CBD) = 0.98443$

$\sin(m\angle DCB) = 0.85141$

$$\frac{BC}{2 \cdot AB} - \sin(m\angle BDC) = 0.00000$$

$$\frac{CD}{2 \cdot AB} - \sin(m\angle CBD) = 0.00000$$

$$\frac{BD}{2 \cdot AB} - \sin(m\angle DCB) = 0.00000$$

$$\frac{BC \cdot CD \cdot BD}{\sqrt{BC + CD + BD} \cdot \sqrt{CD + BD - BC} \cdot \sqrt{BC - CD + BD} \cdot \sqrt{BC + CD - BD}} - AB = 0.00000$$

$$\frac{BC \cdot CD \cdot BD}{\sqrt{BC + CD + BD} \cdot \sqrt{CD + BD - BC} \cdot \sqrt{BC - CD + BD} \cdot \sqrt{BC + CD - BD}} = 4.31303$$

Any Triangle Whatsoever.

Square and Root Deductive

$Unit = 1.00000$

$a = 0.64856$

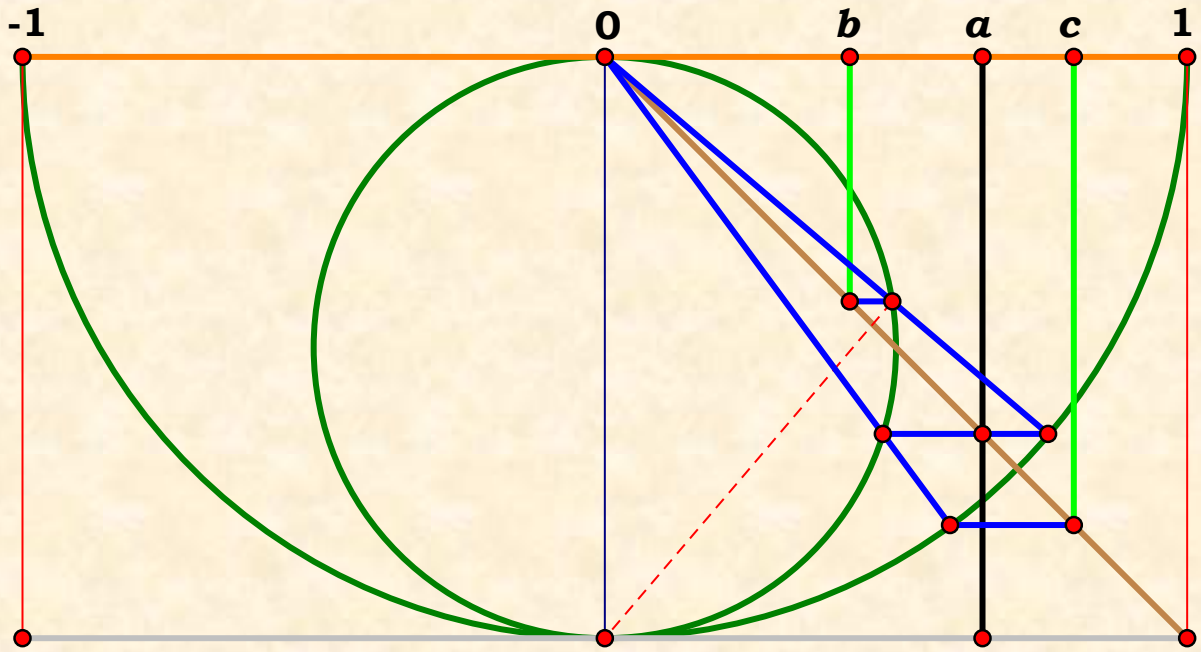
$b = 0.42063$

$c = 0.80533$

$\sqrt{a} - c = 0.00000$

$a^2 - b = 0.00000$

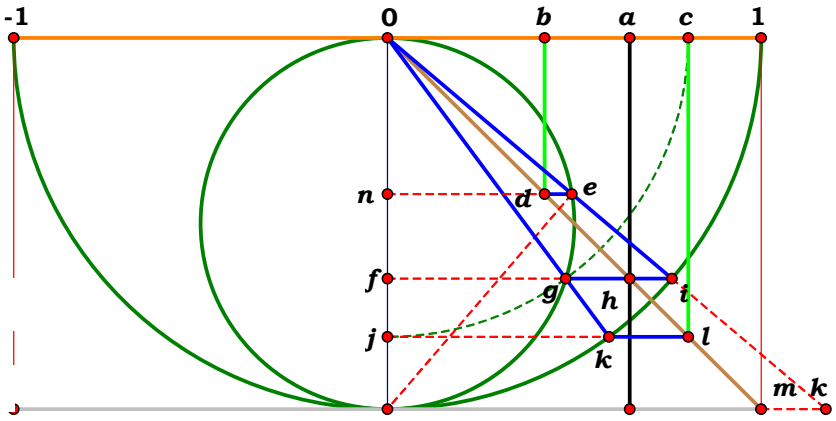
Square and Root



Unit = 1.00000
a = 0.64856
b = 0.42063
c = 0.80533
$\sqrt{a} - c = 0.00000$
$a^2 - b = 0.00000$

e = 0.49366

Root and Power



Square and Root Deductive

$a := .64856 \quad o := 0$

$fo := a \quad fh := a \quad oh := \sqrt{a} \quad io := 1$

$fi := \sqrt{1 - fo^2} \quad fg := \sqrt{fo \cdot (1 - fo)}$

$go := \sqrt{fo^2 + fg^2} \quad c := go \quad c - \sqrt{a} = 0$

$k := \frac{fi}{fo} \quad en := \frac{k}{k^2 + 1} \quad en = 0.49366$

$dn := \frac{en}{k} \quad b := dn$

For this operation, the inductive process used just the diagonal om, but the deductive required a hemisphere to proportion it.

Definitions

$fo - a = 0 \quad fh := a \quad oh - \sqrt{a} = 0 \quad io - 1$

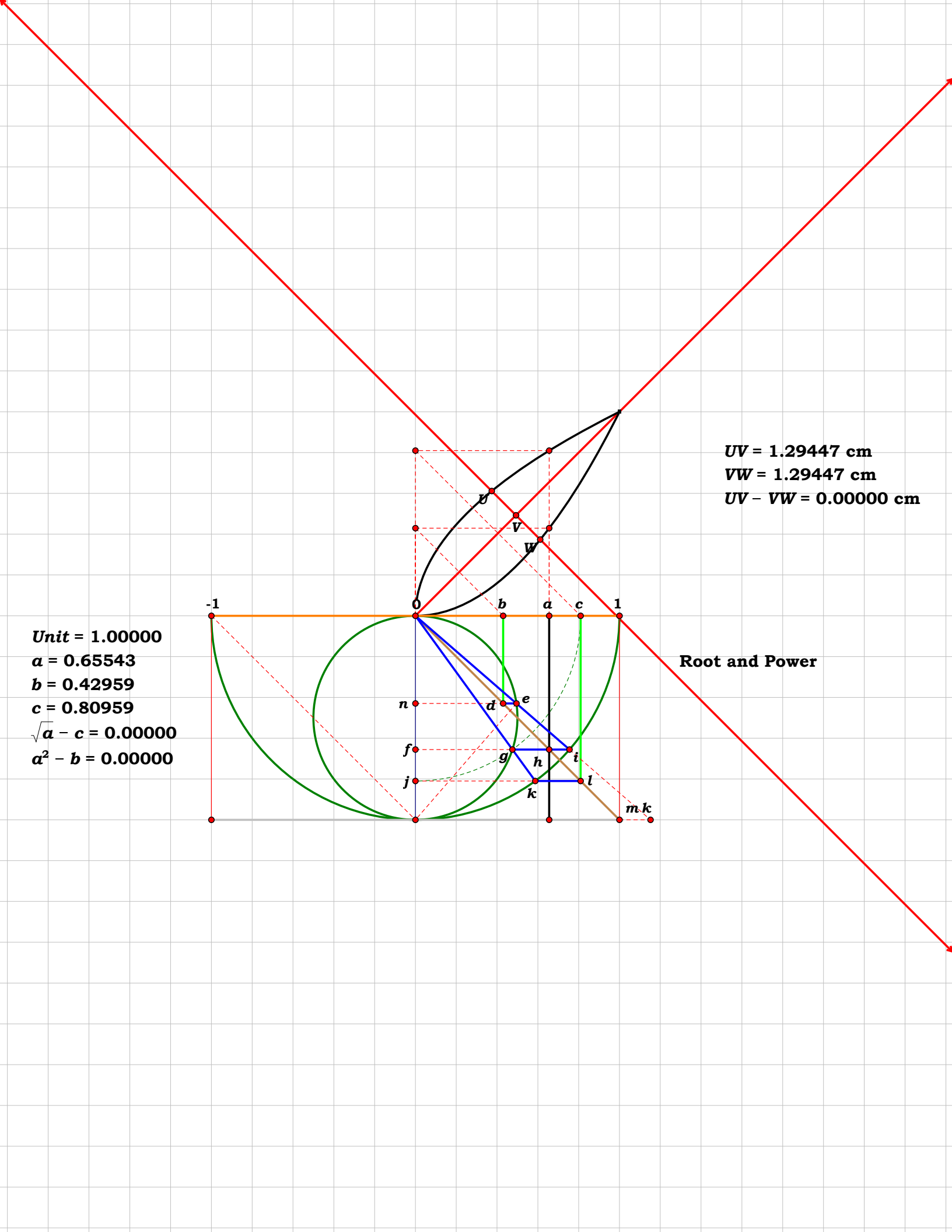
$fi - \sqrt{1 - a^2} = 0 \quad fg - \sqrt{a \cdot (1 - a)} = 0$

$fg - \sqrt{\left(a - a^2\right)} = 0 \quad go - \sqrt{a} = 0 \quad c := go$

$c - \sqrt{a} = 0$

$k - \frac{\sqrt{1 - a^2}}{a} = 0 \quad en - a \cdot \sqrt{1 - a^2} = 0$

$dn - a^2 = 0 \quad b - a^2 = 0$


UV = 1.29447 cm
VW = 1.29447 cm
UV − VW = 0.00000 cm
Unit = 1.00000
a = 0.65543
b = 0.42959
c = 0.80959
√a − c = 0.00000
a² − b = 0.00000
Root and Power
-1
0
b
a
c
1
U
V
W
n
d
e
f
g
h
i
j
k
l
m k

$Unit = 1.00000$

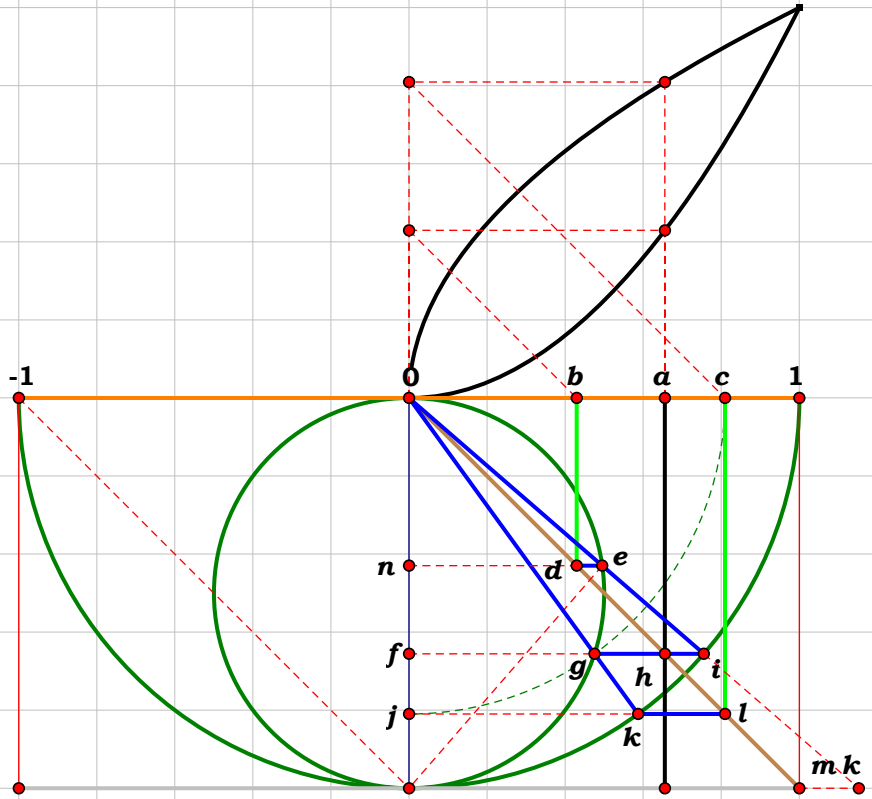
$a = 0.65543$

$b = 0.42959$

$c = 0.80959$

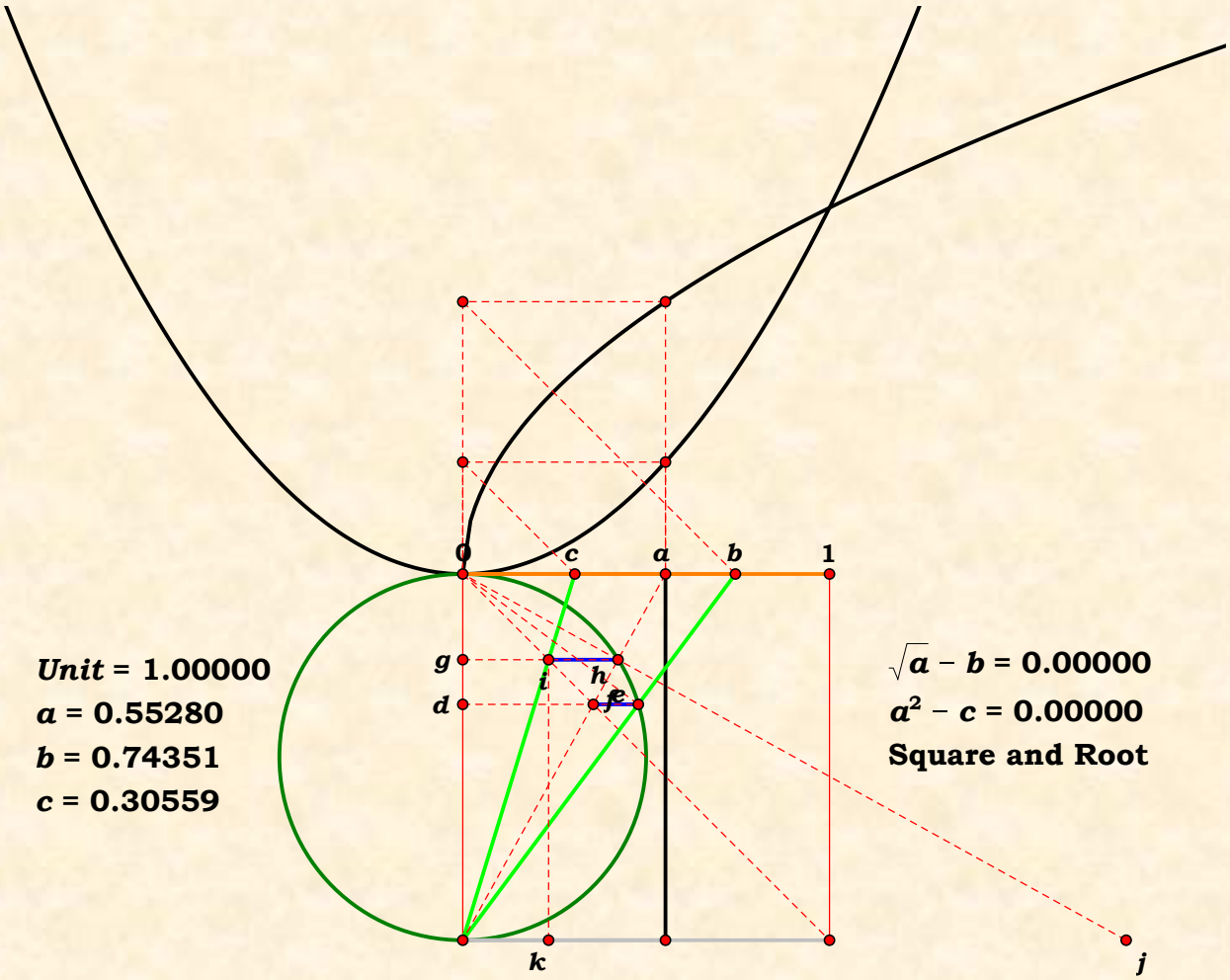
$\sqrt{a} - c = 0.00000$

$a^2 - b = 0.00000$



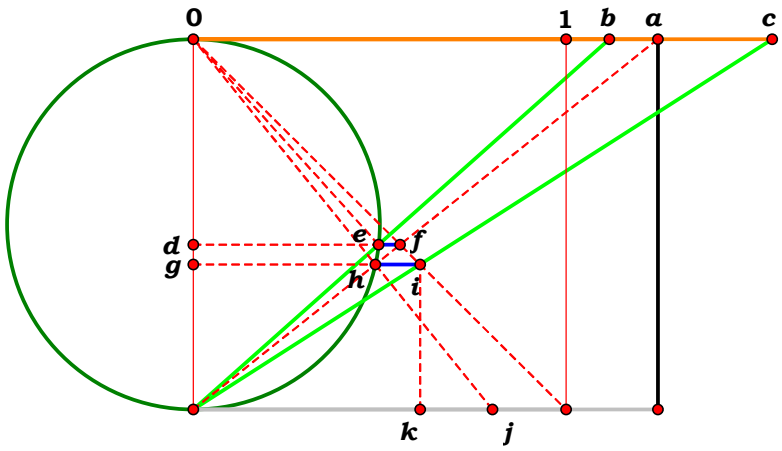
Root and Power

Square and Root Inductive



Unit = 1.00000
a = 1.24638
b = 1.11641
c = 1.55346

$\sqrt{a} - b = 0.00000$
$a^2 - c = 0.00000$
Square and Root



Square and Root Inductive

$a := 1.24638$

$d := 1 - \frac{1}{a+1}$ $\quad e := \sqrt{d \cdot (1-d)}$

$b := \frac{d}{e}$ $\quad j := \frac{1}{a}$ $\quad g := \frac{a}{a+j}$

$ik := 1 - g$ $\quad c := \frac{g}{ik}$ $\quad c = 1.55346$

Definitions

$d - \frac{a}{a+1} = 0$ $\quad e - \frac{\sqrt{a}}{\sqrt{(a+1)^2}} = 0$

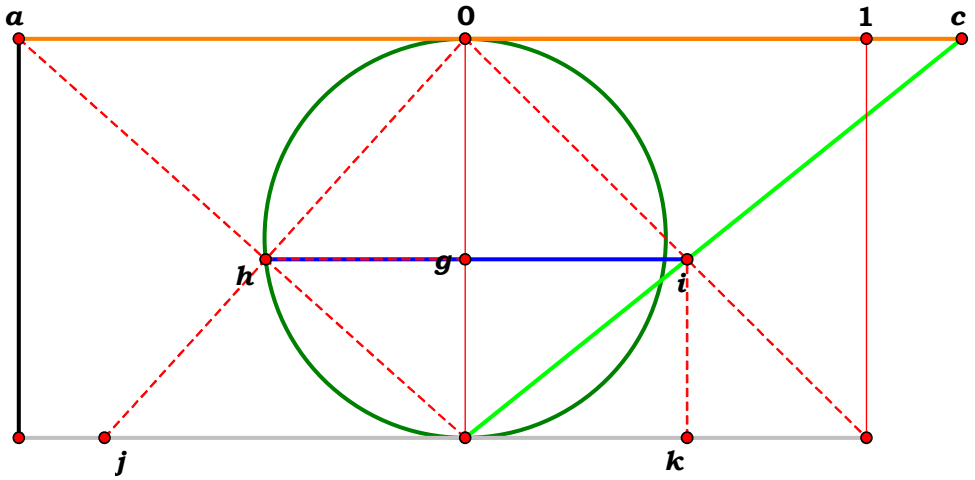
$b - \sqrt{a} = 0$ $\quad j - \frac{1}{a} = 0$

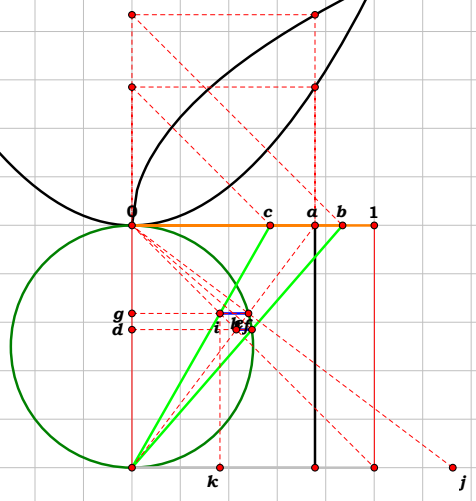
$g - \frac{a^2}{a^2+1} = 0$ $\quad ik - \frac{1}{a^2+1} = 0$ $\quad c - a^2 = 0$

Unit = 1.00000
a = –1.11247

$a^2 - c = 0.00000$
Square and Root

c = 1.23759





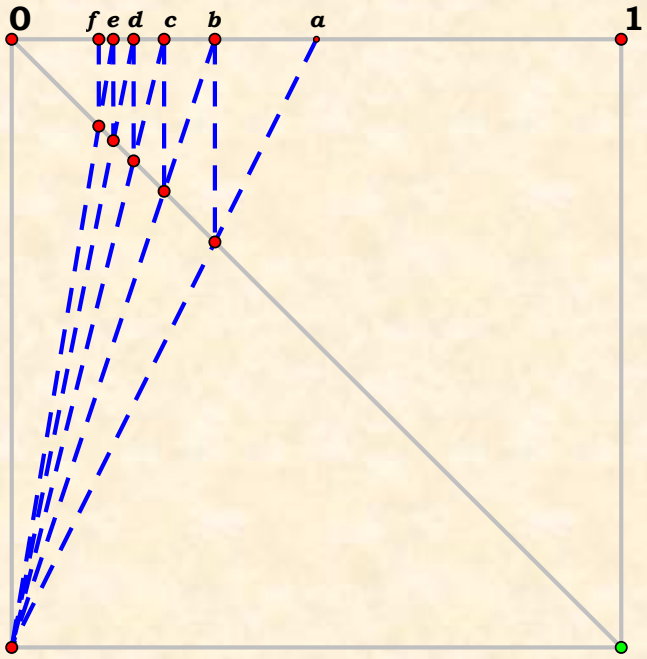
Unit **= 1.00000**
a **= 0.75538**
b **= 0.86913**
c **= 0.57060**

$\sqrt{a} - b = 0.00000$
$a^2 - c = 0.00000$
Square and Root

Arithmetic Series

Unit = 1.00000
1 = 1.00000
0 = 0.00000
a = 0.50000
b = 0.33333
c = 0.25000
d = 0.20000
e = 0.16667
f = 0.14286

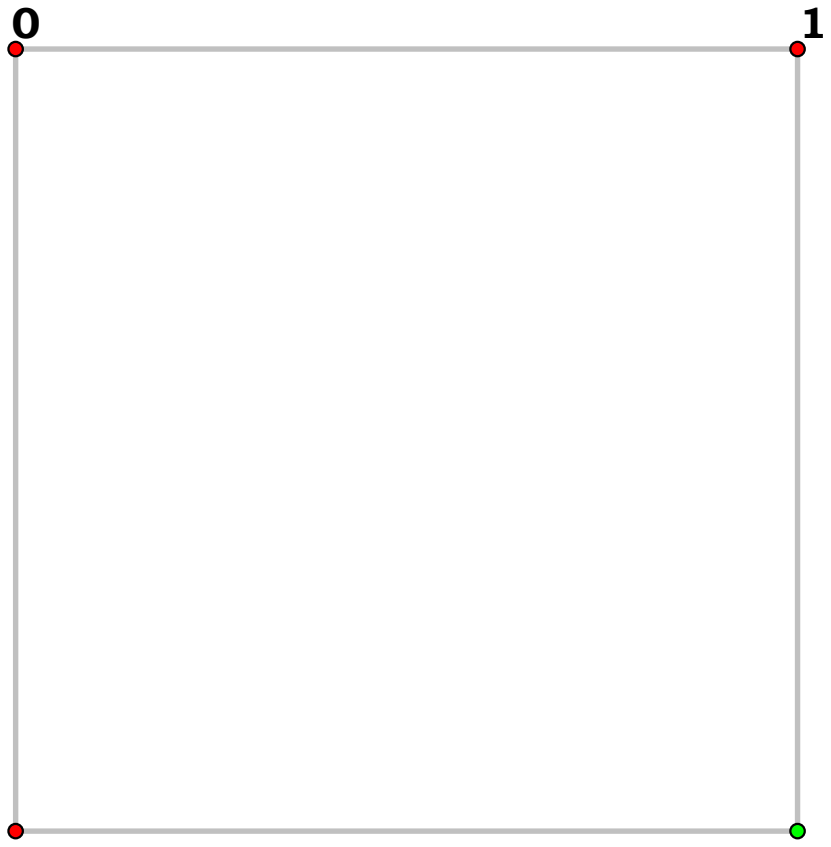
$\frac{1}{2}$ = 0.50000
$\frac{1}{3}$ = 0.33333
$\frac{1}{4}$ = 0.25000
$\frac{1}{5}$ = 0.20000
$\frac{1}{6}$ = 0.16667
$\frac{1}{7}$ = 0.14286



Unit **= 1.00000**

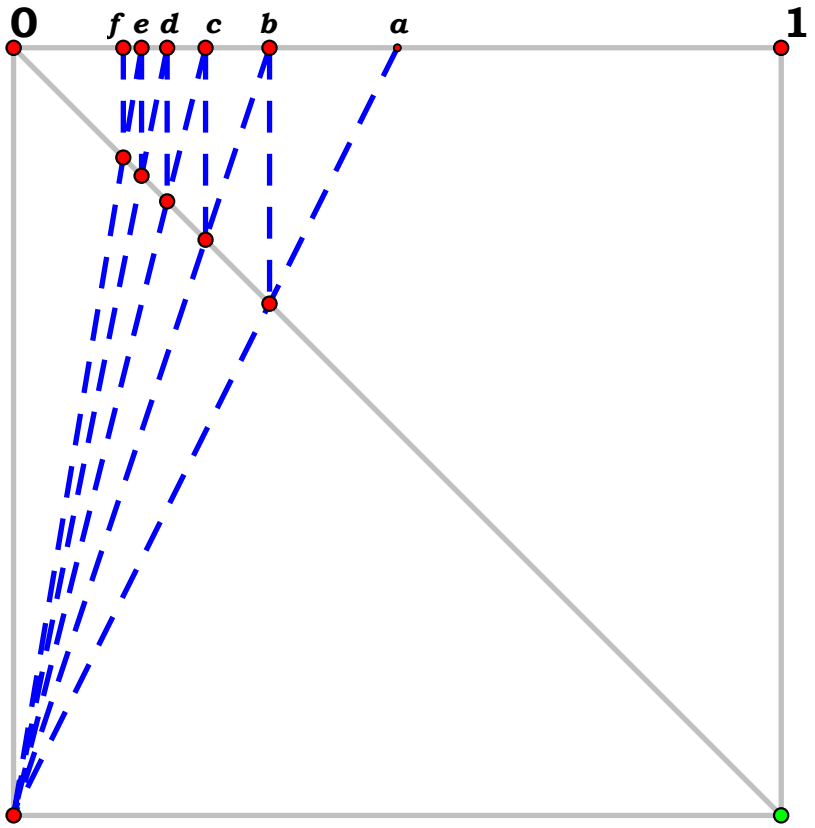
1 = 1.00000

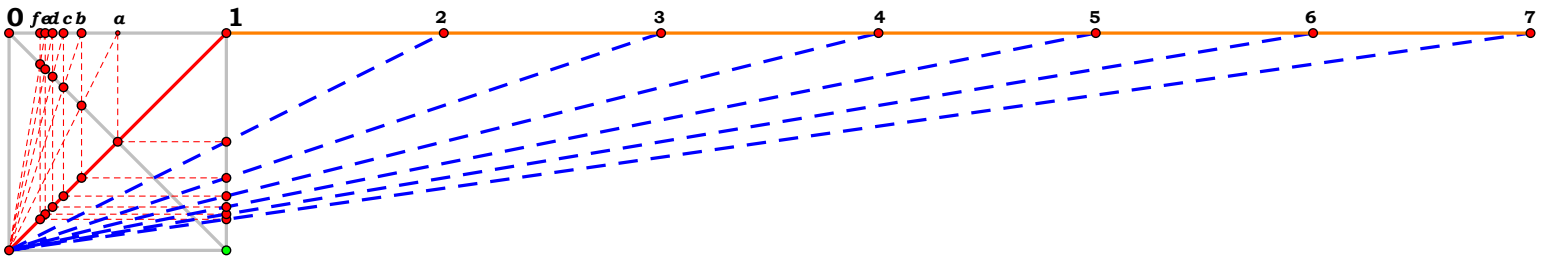
0 = 0.00000



Unit = 1.00000
1 = 1.00000
0 = 0.00000
a = 0.50000
b = 0.33333
c = 0.25000
d = 0.20000
e = 0.16667
f = 0.14286

$\frac{1}{2}$ = 0.50000
$\frac{1}{3}$ = 0.33333
$\frac{1}{4}$ = 0.25000
$\frac{1}{5}$ = 0.20000
$\frac{1}{6}$ = 0.16667
$\frac{1}{7}$ = 0.14286





Unit = 1.00000

1 = 1.00000
0 = 0.00000
a = 0.50000
b = 0.33333
c = 0.25000
d = 0.20000
e = 0.16667
f = 0.14286

$\frac{1}{2}$ = 0.50000 $\frac{1}{5}$ = 0.20000

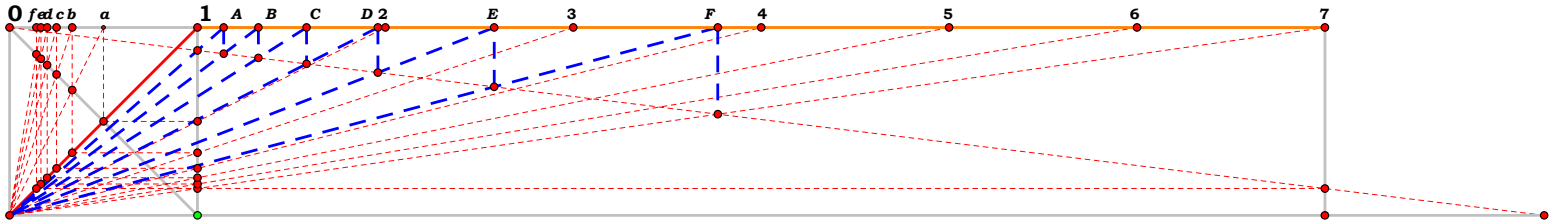
$\frac{1}{3}$ = 0.33333 $\frac{1}{6}$ = 0.16667

$\frac{1}{4}$ = 0.25000 $\frac{1}{7}$ = 0.14286

$\frac{7^2}{7^2-6} = 1.13953$ $\frac{7^2}{7^2-4\cdot6} = 1.96000$

$\frac{7^2}{7^2-2\cdot6} = 1.32432$ $\frac{7^2}{7^2-5\cdot6} = 2.57895$

$\frac{7^2}{7^2-3\cdot6} = 1.58065$ $\frac{7^2}{7^2-6\cdot6} = 3.76923$



Unit = 1.00000

1 = 1.00000
0 = 0.00000
a = 0.50000
b = 0.33333
c = 0.25000
d = 0.20000
e = 0.16667
f = 0.14286

$\frac{1}{2} = 0.50000$ $\frac{1}{5} = 0.20000$ $\frac{49}{43} = 1.13953$ *A* = 1.13953 $\frac{49}{25} = 1.96000$ *D* = 1.96000

$\frac{1}{3} = 0.33333$ $\frac{1}{6} = 0.16667$ $\frac{49}{37} = 1.32432$ *B* = 1.32432 $\frac{49}{19} = 2.57895$ *E* = 2.57895

$\frac{1}{4} = 0.25000$ $\frac{1}{7} = 0.14286$ $\frac{49}{31} = 1.58065$ *C* = 1.58065 $\frac{49}{13} = 3.76923$ *F* = 3.76923

$\frac{G \cdot 7}{(G \cdot 7) - (G - 1)} - A = 0.00000$

$\frac{G \cdot 7}{(G \cdot 7) - 2 \cdot (G - 1)} - B = 0.00000$

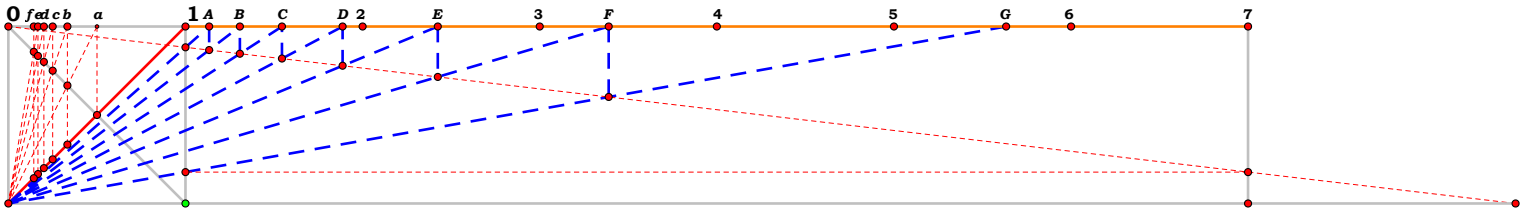
$\frac{G \cdot 7}{(G \cdot 7) - 3 \cdot (G - 1)} - C = 0.00000$

$\frac{G \cdot 7}{(G \cdot 7) - 4 \cdot (G - 1)} - D = 0.00000$

$\frac{G \cdot 7}{(G \cdot 7) - 5 \cdot (G - 1)} - E = 0.00000$

$\frac{G \cdot 7}{(G \cdot 7) - 6 \cdot (G - 1)} - F = 0.00000$

$\frac{G \cdot 7}{(G \cdot 7) - 7 \cdot (G - 1)} - G = 0.00000$



$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.50000$

$b = 0.33333$

$c = 0.25000$

$d = 0.20000$

$e = 0.16667$

$f = 0.14286$

$\frac{1}{2} = 0.50000$

$\frac{1}{3} = 0.33333$

$\frac{1}{4} = 0.25000$

$\frac{1}{5} = 0.20000$

$\frac{1}{6} = 0.16667$

$\frac{1}{7} = 0.14286$

$A = 1.13314$

$B = 1.30719$

$C = 1.54440$

$D = 1.88678$

$E = 2.42422$

$F = 3.38977$

$G = 5.63362$

$G \cdot 7 = 39.43532$

$(G - 1) = 4.63362$

$G = 0.57589$
$F = 0.70219$
$E = 0.77053$
$D = 0.81336$
$C = 0.84271$
$B = 0.86409$
$A = 0.88035$

$\frac{7}{13} - G = -0.03743$
$\frac{13}{19} - F = -0.01798$
$\frac{19}{25} - E = -0.01053$
$\frac{25}{31} - D = -0.00691$
$\frac{31}{37} - C = -0.00488$
$\frac{37}{43} - B = -0.00363$
$\frac{43}{49} - A = -0.00280$

$\frac{7}{12} - G = 0.00744$
$\frac{12}{17} - F = 0.00369$
$\frac{17}{22} - E = 0.00220$
$\frac{22}{27} - D = 0.00146$
$\frac{27}{32} - C = 0.00104$
$\frac{32}{37} - B = 0.00077$
$\frac{37}{42} - A = 0.00060$

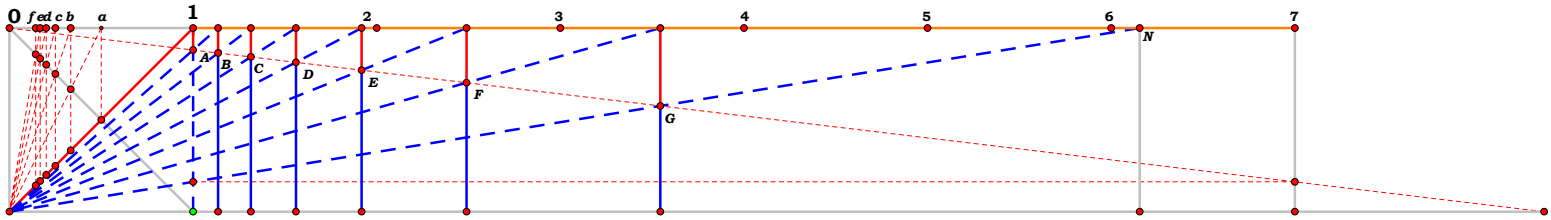
$\frac{7}{11} - G = 0.06047$
$\frac{11}{15} - F = 0.03114$
$\frac{15}{19} - E = 0.01894$
$\frac{19}{23} - D = 0.01273$
$\frac{23}{27} - C = 0.00914$
$\frac{27}{31} - B = 0.00688$
$\frac{31}{35} - A = 0.00536$

$\frac{7}{10} - G = 0.12411$
$\frac{10}{13} - F = 0.06704$
$\frac{13}{16} - E = 0.04197$
$\frac{16}{19} - D = 0.02875$
$\frac{19}{22} - C = 0.02092$
$\frac{22}{25} - B = 0.01591$
$\frac{25}{28} - A = 0.01250$

$\frac{7}{9} - G = 0.20189$
$\frac{9}{11} - F = 0.11599$
$\frac{11}{13} - E = 0.07562$
$\frac{13}{15} - D = 0.05331$
$\frac{15}{17} - C = 0.03964$
$\frac{17}{19} - B = 0.03065$
$\frac{19}{21} - A = 0.02441$

$\frac{7}{8} - G = 0.29911$
$\frac{8}{9} - F = 0.18670$
$\frac{9}{10} - E = 0.12947$
$\frac{10}{11} - D = 0.09573$
$\frac{11}{12} - C = 0.07395$
$\frac{12}{13} = 0.92308$
$\frac{13}{14} - A = 0.04822$

$\frac{7 + 0\cdot(N-1)}{7 + N - 1} - G = 0.00000$
$\frac{7 + N - 1}{7 + 2\cdot(N-1)} - F = 0.00000$
$\frac{7 + 2\cdot(N-1)}{7 + 3\cdot(N-1)} - E = 0.00000$
$\frac{7 + 3\cdot(N-1)}{7 + 4\cdot(N-1)} - D = 0.00000$
$\frac{7 + 4\cdot(N-1)}{7 + 5\cdot(N-1)} - C = 0.00000$
$\frac{7 + 5\cdot(N-1)}{7 + 6\cdot(N-1)} - B = 0.00000$
$\frac{7 + 6\cdot(N-1)}{7 + 7\cdot(N-1)} - A = 0.00000$



$Unit = 1.00000$
$1 = 1.00000$
$0 = 0.00000$
$a = 0.50000$
$b = 0.33333$
$c = 0.25000$
$d = 0.20000$
$e = 0.16667$
$f = 0.14286$

$\frac{1}{2} = 0.50000$
$\frac{1}{3} = 0.33333$
$\frac{1}{4} = 0.25000$
$\frac{1}{5} = 0.20000$
$\frac{1}{6} = 0.16667$
$\frac{1}{7} = 0.14286$

$N = 6.15508$

$(7 + 0\cdot(N-1)) = 7.00000$
$(7 + N - 1) = 12.15508$
$(7 + 2\cdot(N-1)) = 17.31016$
$7 + 3\cdot(N-1) = 22.46523$
$7 + 4\cdot(N-1) = 27.62031$
$7 + 5\cdot(N-1) = 32.77539$
$7 + 6\cdot(N-1) = 37.93047$
$7 + 7\cdot(N-1) = 43.08555$

$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.66667$

$b = 0.40000$

$c = 0.28571$

$d = 0.22222$

$e = 0.18182$

$f = 0.15385$

$g = 0.13333$

$h = 0.11765$

$\frac{2}{3} = 0.66667$

$\frac{2}{5} = 0.40000$

$\frac{2}{7} = 0.28571$

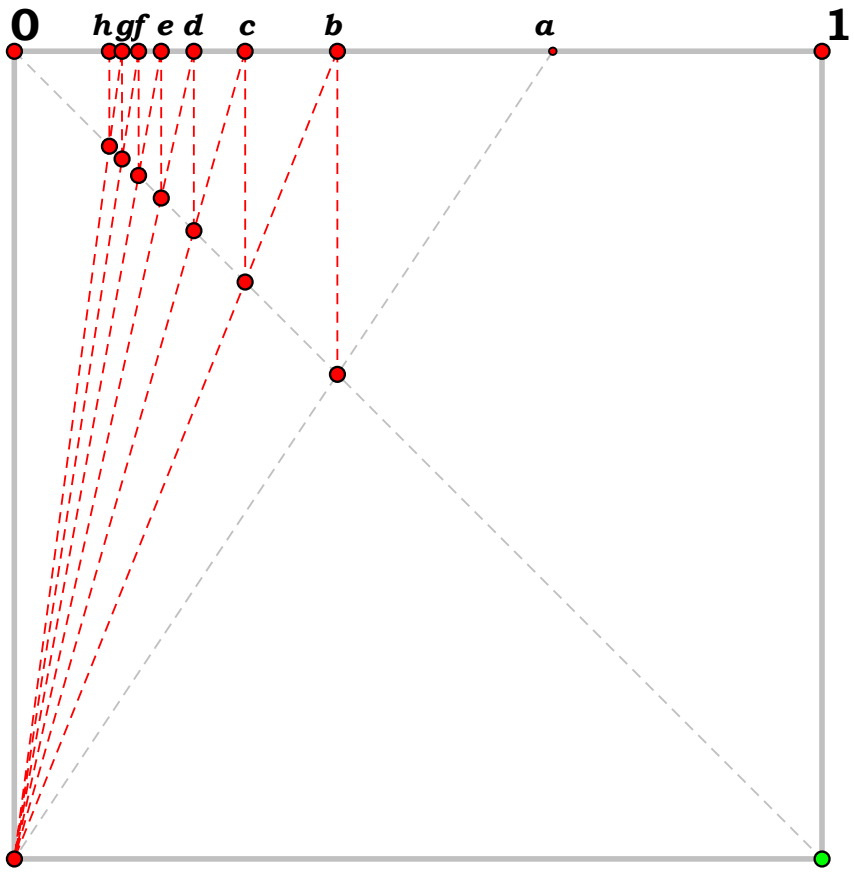
$\frac{2}{9} = 0.22222$

$\frac{2}{11} = 0.18182$

$\frac{2}{13} = 0.15385$

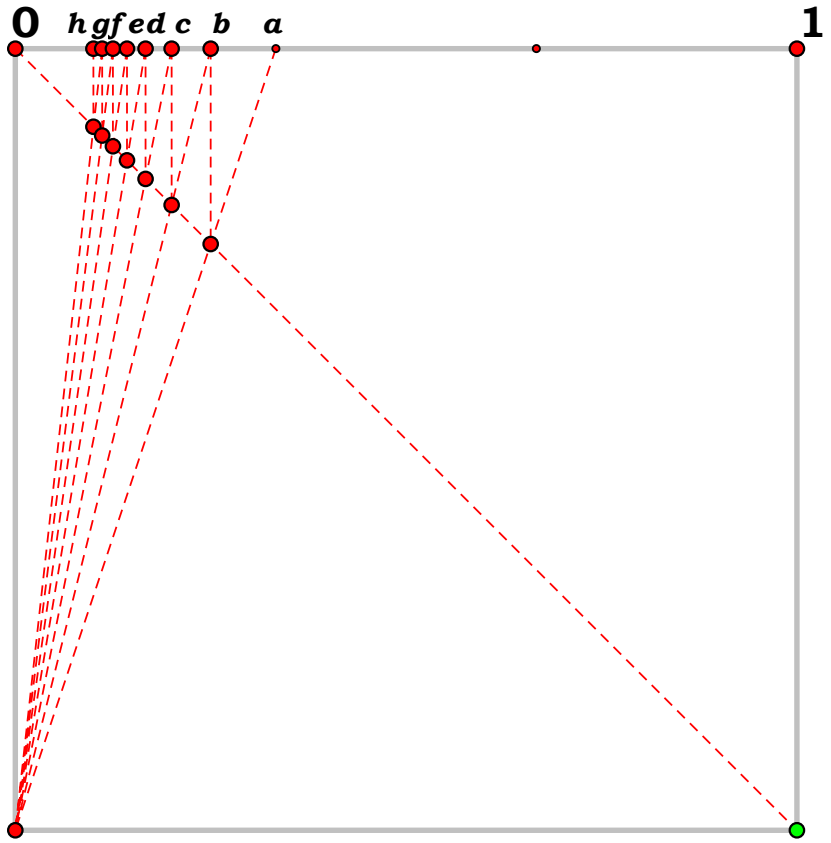
$\frac{2}{15} = 0.13333$

$\frac{2}{17} = 0.11765$



Unit = 1.00000
1 = 1.00000
0 = 0.00000
a = 0.33333
b = 0.25000
c = 0.20000
d = 0.16667
e = 0.14286
f = 0.12500
g = 0.11111
h = 0.10000

$\frac{1}{3}$ = 0.33333
$\frac{1}{4}$ = 0.25000
$\frac{1}{5}$ = 0.20000
$\frac{1}{6}$ = 0.16667
$\frac{1}{7}$ = 0.14286
$\frac{1}{8}$ = 0.12500
$\frac{1}{9}$ = 0.11111
$\frac{1}{10}$ = 0.10000



$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.80000$

$b = 0.44444$

$c = 0.30769$

$d = 0.23529$

$e = 0.19048$

$f = 0.16000$

$g = 0.13793$

$h = 0.12121$

$\frac{4}{5} = 0.80000$

$\frac{4}{9} = 0.44444$

$\frac{4}{13} = 0.30769$

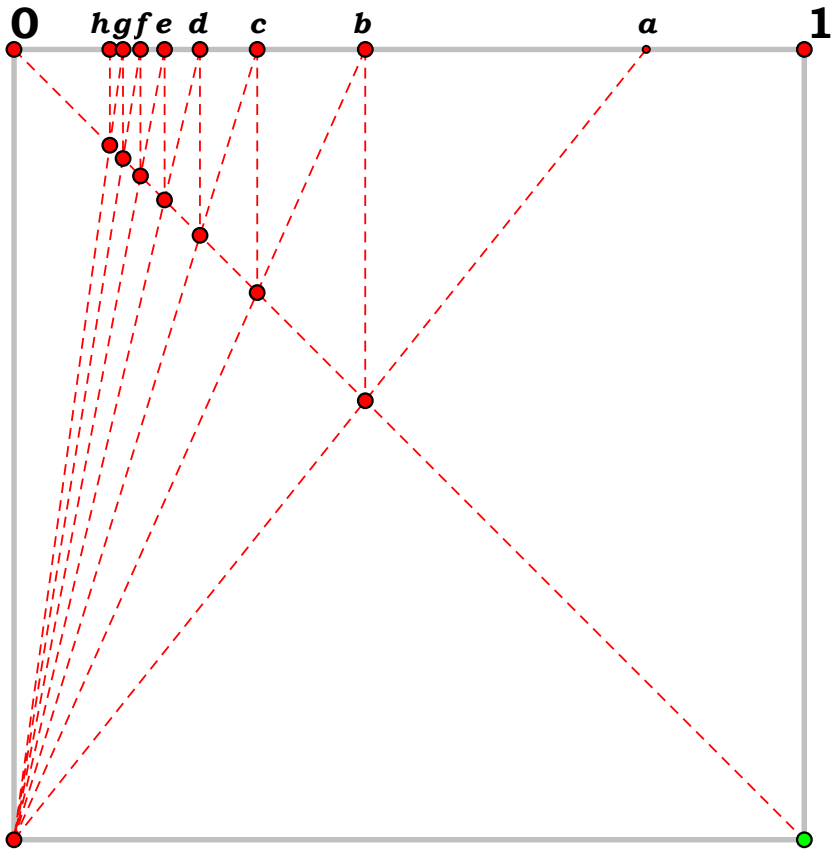
$\frac{4}{17} = 0.23529$

$\frac{4}{21} = 0.19048$

$\frac{4}{25} = 0.16000$

$\frac{4}{29} = 0.13793$

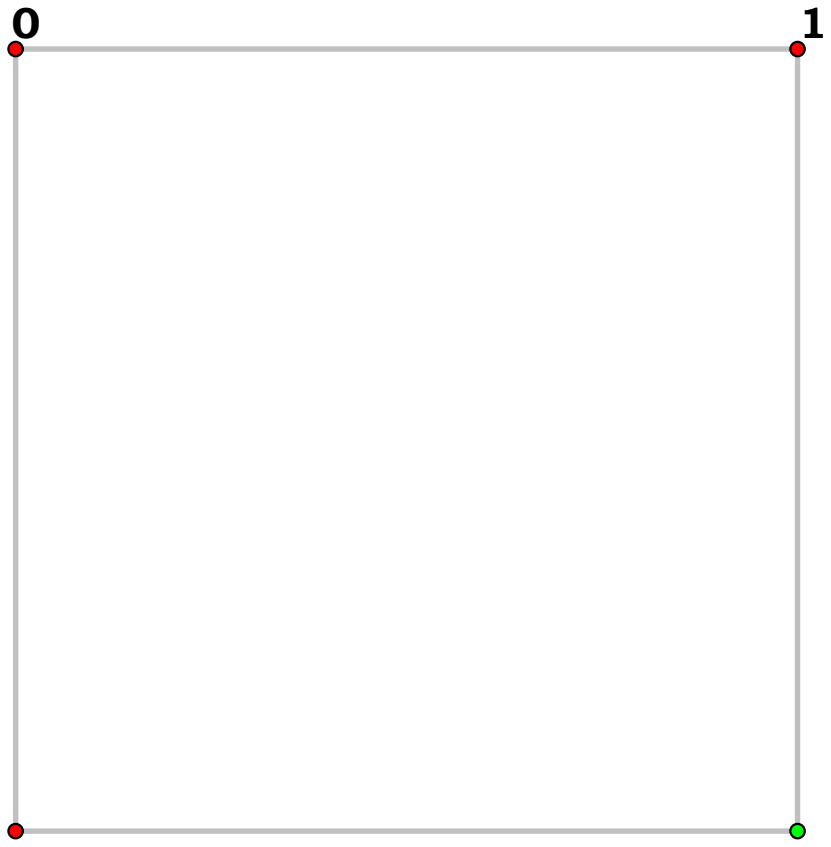
$\frac{4}{33} = 0.12121$



Unit **= 1.00000**

1 = 1.00000

0 = 0.00000



$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.50000$

$b = 0.42857$

$c = 0.37500$

$d = 0.33333$

$e = 0.30000$

$f = 0.27273$

$g = 0.25000$

$h = 0.23077$

$\frac{3}{6} = 0.50000$

$\frac{3}{7} = 0.42857$

$\frac{3}{8} = 0.37500$

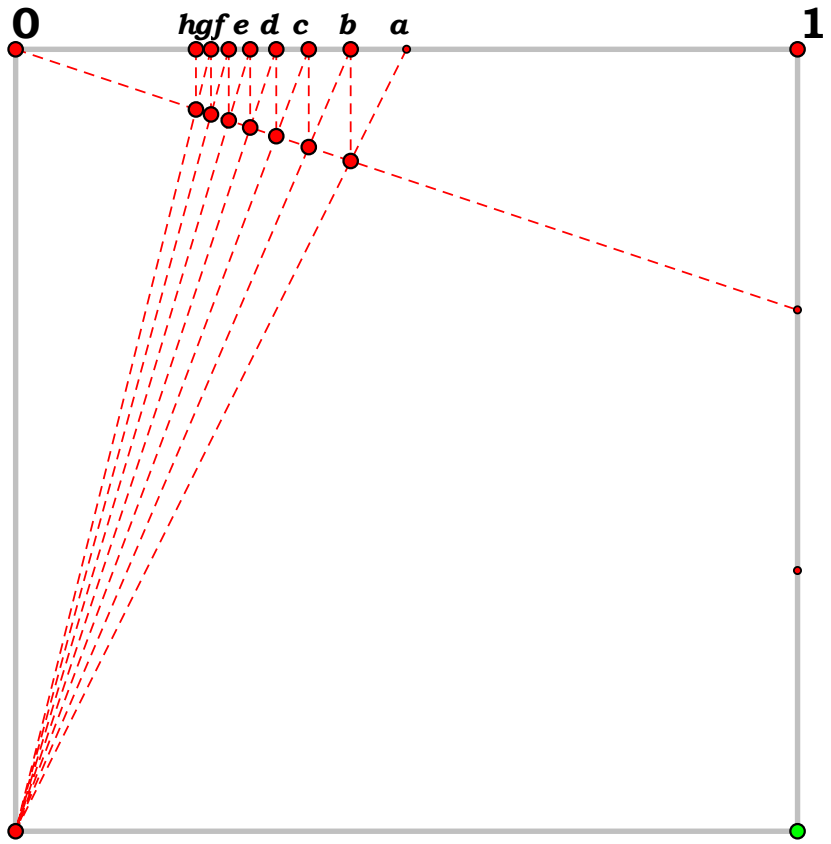
$\frac{3}{9} = 0.33333$

$\frac{3}{10} = 0.30000$

$\frac{3}{11} = 0.27273$

$\frac{3}{12} = 0.25000$

$\frac{3}{13} = 0.23077$



Move Unit Point

Show Base Line Points (20)

X1

X2

X3

X4

X5

X6

X7

X8

X9

X10

X11

X12

X13

X14

X15

X16

X17

X18

X19

X20

$13 \cdot N_1 = 42.46040$

$N_1 - 1 = 2.26618$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - (N_1 - 1)} - A = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 2 \cdot (N_1 - 1)} - B = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 3 \cdot (N_1 - 1)} - C = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 4 \cdot (N_1 - 1)} - D = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 5 \cdot (N_1 - 1)} - E = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 6 \cdot (N_1 - 1)} - F = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 7 \cdot (N_1 - 1)} - G = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 8 \cdot (N_1 - 1)} - H = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 9 \cdot (N_1 - 1)} - I = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 10 \cdot (N_1 - 1)} - J = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 11 \cdot (N_1 - 1)} - K = 0.00000$

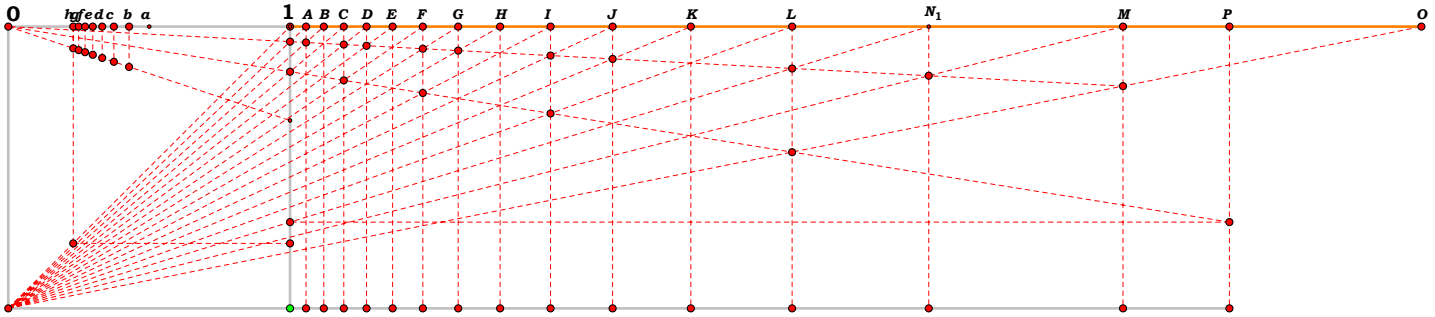
$\frac{13 \cdot N_1}{(13 \cdot N_1) - 12 \cdot (N_1 - 1)} - L = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 13 \cdot (N_1 - 1)} - N_1 = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 14 \cdot (N_1 - 1)} - M = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 15 \cdot (N_1 - 1)} - O = 0.00000$

$\frac{1}{h} - P = 0.00000$



Unit = 1.00000

1 = 1.00000

0 = 0.00000

a = 0.50000

b = 0.42857

c = 0.37500

d = 0.33333

e = 0.30000

f = 0.27273

g = 0.25000

h = 0.23077

$\frac{3}{6} = 0.50000$

$\frac{3}{7} = 0.42857$

$\frac{3}{8} = 0.37500$

$\frac{3}{9} = 0.33333$

$\frac{3}{10} = 0.30000$

$\frac{3}{11} = 0.27273$

$\frac{3}{12} = 0.25000$

$\frac{3}{13} = 0.23077$

A = 1.05638

B = 1.11950

C = 1.19064

D = 1.27143

E = 1.36399

F = 1.47109

G = 1.59643

H = 1.74512

I = 1.92436

J = 2.14462

K = 2.42183

L = 2.78134

N_1 = 3.26618

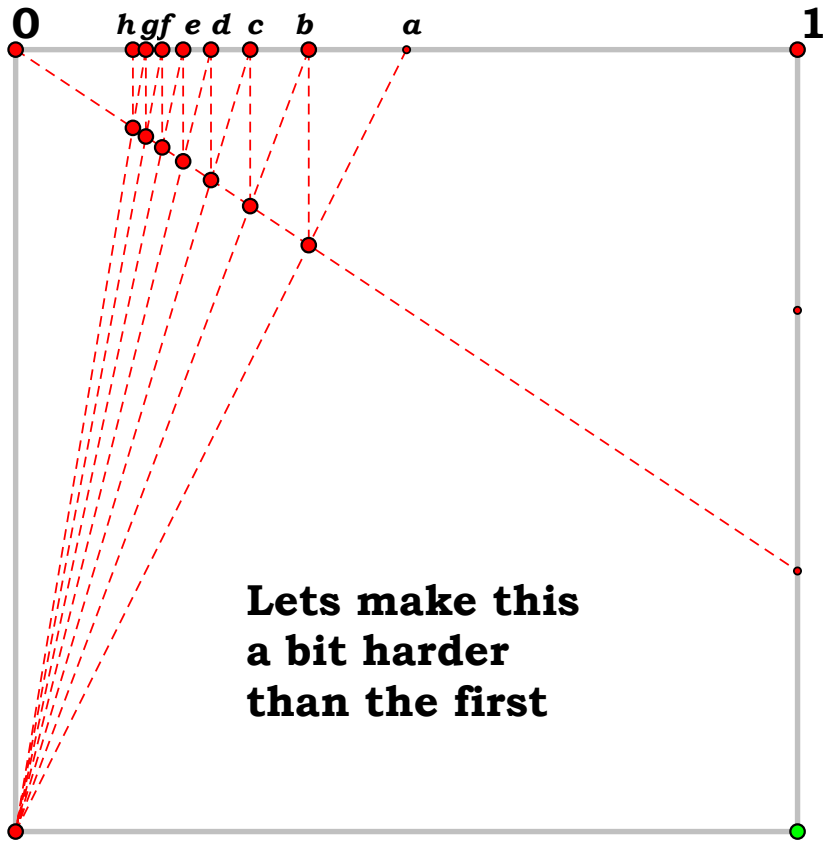
M = 3.95576

O = 5.01444

P = 4.33333

Unit = 1.00000
1 = 1.00000
0 = 0.00000
a = 0.50000
b = 0.37500
c = 0.30000
d = 0.25000
e = 0.21429
f = 0.18750
g = 0.16667
h = 0.15000

$\frac{3}{6}$ = 0.50000
$\frac{3}{8}$ = 0.37500
$\frac{3}{10}$ = 0.30000
$\frac{3}{12}$ = 0.25000
$\frac{3}{14}$ = 0.21429
$\frac{3}{16}$ = 0.18750
$\frac{3}{18}$ = 0.16667
$\frac{3}{20}$ = 0.15000



Unit = 1.00000

1 = 1.00000

0 = 0.00000

a = 0.33333

b = 0.27273

c = 0.23077

d = 0.20000

e = 0.17647

f = 0.15789

g = 0.14286

h = 0.13043

$\frac{3}{9} - a = 0.00000$

$\frac{3}{11} - b = 0.00000$

$\frac{3}{13} - c = 0.00000$

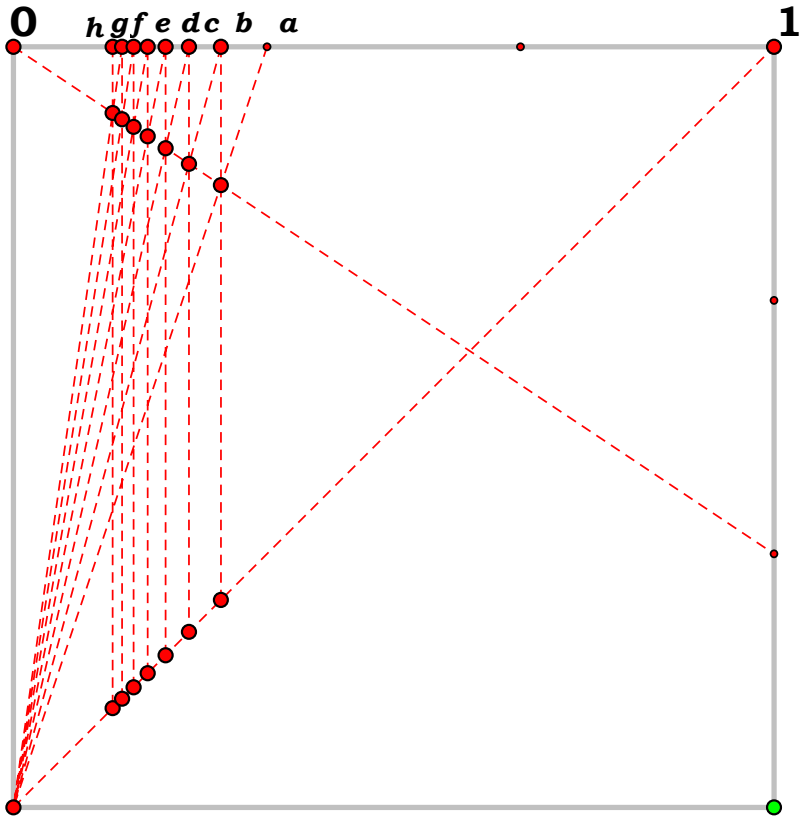
$\frac{3}{15} - d = 0.00000$

$\frac{3}{17} - e = 0.00000$

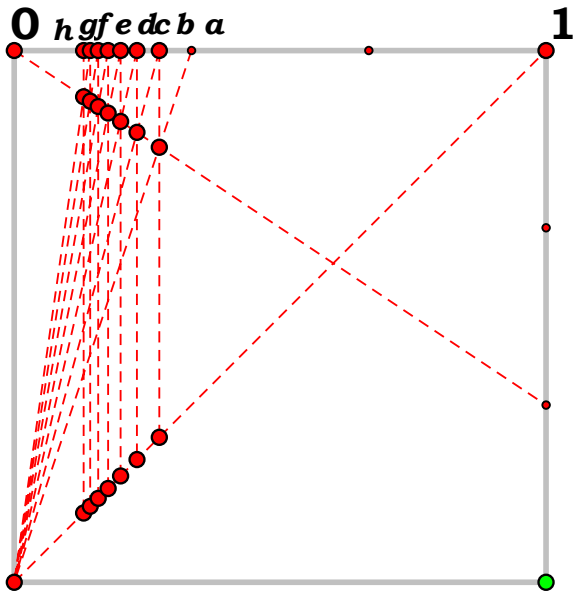
$\frac{3}{19} - f = 0.00000$

$\frac{3}{21} - g = 0.00000$

$\frac{3}{23} - h = 0.00000$



Now we have it. By standardizing one's placement, one can make this figure do some very complicated functions. Unlike the fake Cartesian geometry, I work in the box.



$Unit = 1.00000$

$1 = 1.00000$ $d = 0.20000$

$0 = 0.00000$ $e = 0.17647$

$a = 0.33333$ $f = 0.15789$

$b = 0.27273$ $g = 0.14286$

$c = 0.23077$ $h = 0.13043$

$\frac{3}{9} - a = 0.00000$ $\frac{3}{17} - e = 0.00000$

$\frac{3}{11} - b = 0.00000$ $\frac{3}{19} - f = 0.00000$

$\frac{3}{13} - c = 0.00000$ $\frac{3}{21} - g = 0.00000$

$\frac{3}{15} - d = 0.00000$ $\frac{3}{23} - h = 0.00000$

Move Unit Point

Show Base Line Points (20)

X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 X12 X13 X14 X15 X16 X17 X18 X19 X20

$N_1 \cdot 11 = 44.41906$

$N_1 - 1 = 3.03810$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - (N_1 - 1)} - A = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 2 \cdot (N_1 - 1)} - B = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 3 \cdot (N_1 - 1)} - C = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 4 \cdot (N_1 - 1)} - D = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 5 \cdot (N_1 - 1)} - E = 0.00000$

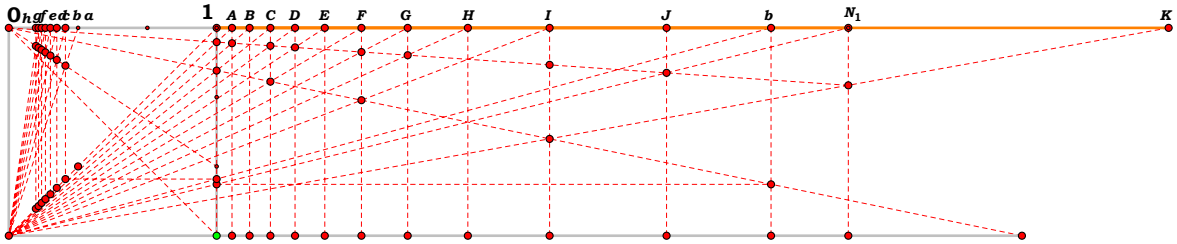
$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 6 \cdot (N_1 - 1)} - F = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 7 \cdot (N_1 - 1)} - G = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 8 \cdot (N_1 - 1)} - H = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 9 \cdot (N_1 - 1)} - I = 0.00000$

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 10 \cdot (N_1 - 1)} - J = 0.00000$



$\frac{3}{9} - a = 0.00000$

$\frac{3}{11} - b = 0.00000$

$\frac{3}{13} - c = 0.00000$

$\frac{3}{15} - d = 0.00000$

$\frac{3}{17} - e = 0.00000$

$\frac{3}{19} - f = 0.00000$

$\frac{3}{21} - g = 0.00000$

$\frac{3}{23} - h = 0.00000$

Unit = 1.00000

1 = 1.00000 $d = 0.20000$

0 = 0.00000 $e = 0.17647$

$a = 0.33333$ $f = 0.15789$

$b = 0.27273$ $g = 0.14286$

$c = 0.23077$ $h = 0.13043$

$N_1 = 4.03810$

$A = 1.07342$ $G = 1.91855$

$B = 1.15847$ $H = 2.20833$

$C = 1.25816$ $I = 2.60123$

$D = 1.37662$ $J = 3.16418$

$E = 1.51971$ $K = 5.57895$

$F = 1.69600$ $x_b = 3.66667$

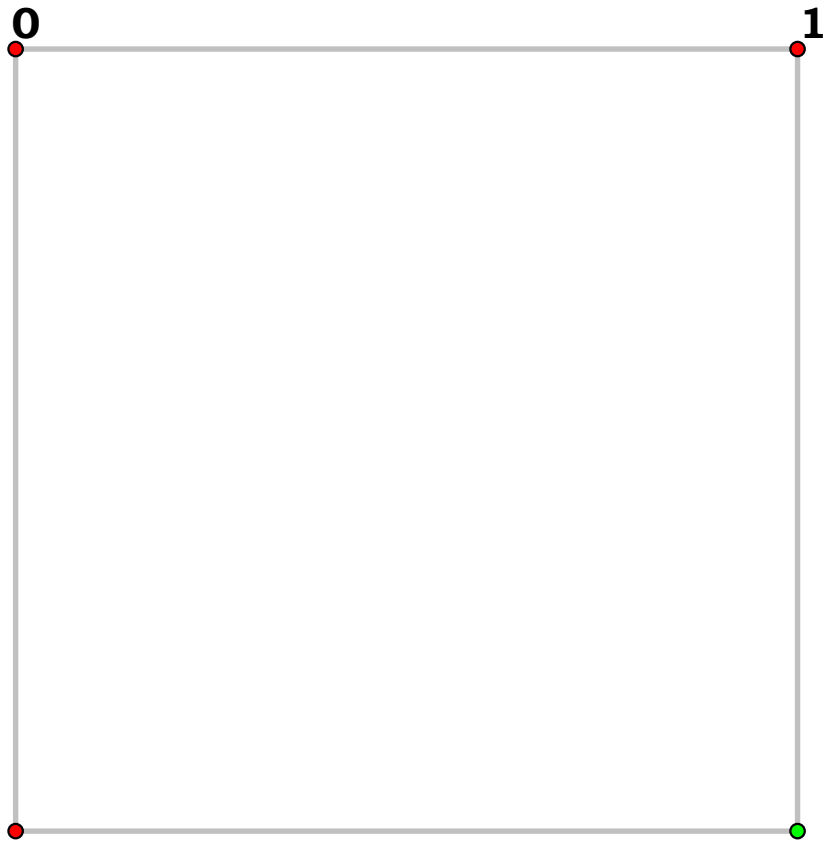
Unlike the first demonstration of the series, this one takes two diagonals because of the fractional excess.

$\frac{N_1 \cdot 11}{(N_1 \cdot 11) - 12 \cdot (N_1 - 1)} - K = 0.00000$

Unit **= 1.00000**

1 = 1.00000

0 = 0.00000



$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.50000$

$b = 0.42857$

$c = 0.37500$

$d = 0.33333$

$e = 0.30000$

$f = 0.27273$

$g = 0.25000$

$h = 0.23077$

$\frac{3}{6} = 0.50000$

$\frac{3}{7} = 0.42857$

$\frac{3}{8} = 0.37500$

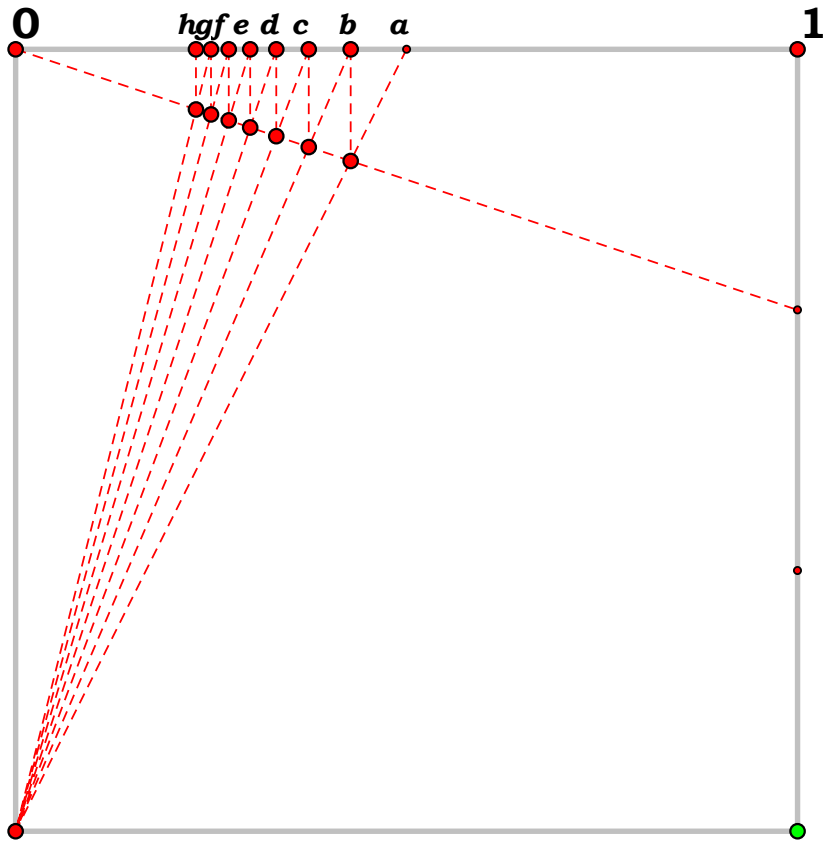
$\frac{3}{9} = 0.33333$

$\frac{3}{10} = 0.30000$

$\frac{3}{11} = 0.27273$

$\frac{3}{12} = 0.25000$

$\frac{3}{13} = 0.23077$



Move Unit Point

Show Base Line Points (20)

X1

X2

X3

X4

X5

X6

X7

X8

X9

X10

X11

X12

X13

X14

X15

X16

X17

X18

X19

X20

$13 \cdot N_1 = 42.46040$

$N_1 - 1 = 2.26618$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - (N_1 - 1)} - A = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 2 \cdot (N_1 - 1)} - B = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 3 \cdot (N_1 - 1)} - C = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 4 \cdot (N_1 - 1)} - D = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 5 \cdot (N_1 - 1)} - E = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 6 \cdot (N_1 - 1)} - F = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 7 \cdot (N_1 - 1)} - G = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 8 \cdot (N_1 - 1)} - H = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 9 \cdot (N_1 - 1)} - I = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 10 \cdot (N_1 - 1)} - J = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 11 \cdot (N_1 - 1)} - K = 0.00000$

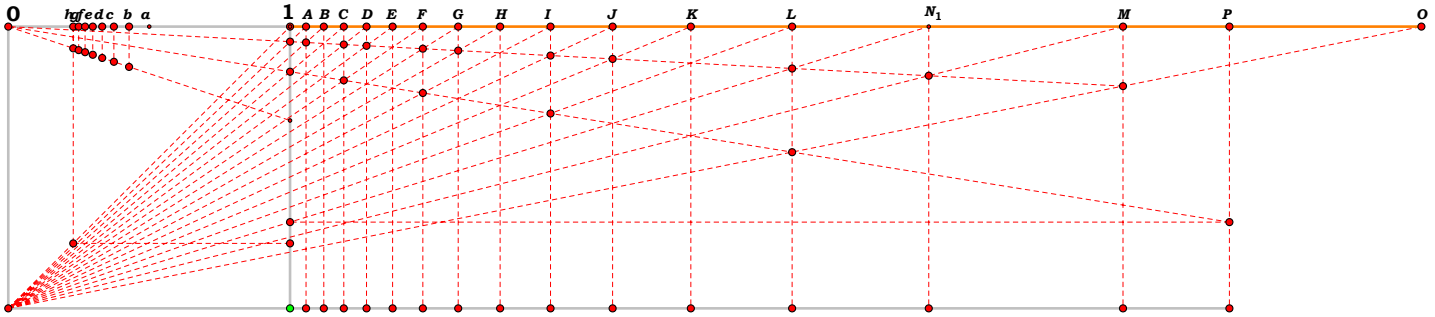
$\frac{13 \cdot N_1}{(13 \cdot N_1) - 12 \cdot (N_1 - 1)} - L = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 13 \cdot (N_1 - 1)} - N_1 = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 14 \cdot (N_1 - 1)} - M = 0.00000$

$\frac{13 \cdot N_1}{(13 \cdot N_1) - 15 \cdot (N_1 - 1)} - O = 0.00000$

$\frac{1}{h} - P = 0.00000$



Unit = 1.00000

1 = 1.00000

0 = 0.00000

a = 0.50000

b = 0.42857

c = 0.37500

d = 0.33333

e = 0.30000

f = 0.27273

g = 0.25000

h = 0.23077

$\frac{3}{6} = 0.50000$

$\frac{3}{7} = 0.42857$

$\frac{3}{8} = 0.37500$

$\frac{3}{9} = 0.33333$

$\frac{3}{10} = 0.30000$

$\frac{3}{11} = 0.27273$

$\frac{3}{12} = 0.25000$

$\frac{3}{13} = 0.23077$

A = 1.05638

B = 1.11950

C = 1.19064

D = 1.27143

E = 1.36399

F = 1.47109

G = 1.59643

H = 1.74512

I = 1.92436

J = 2.14462

K = 2.42183

L = 2.78134

N_1 = 3.26618

M = 3.95576

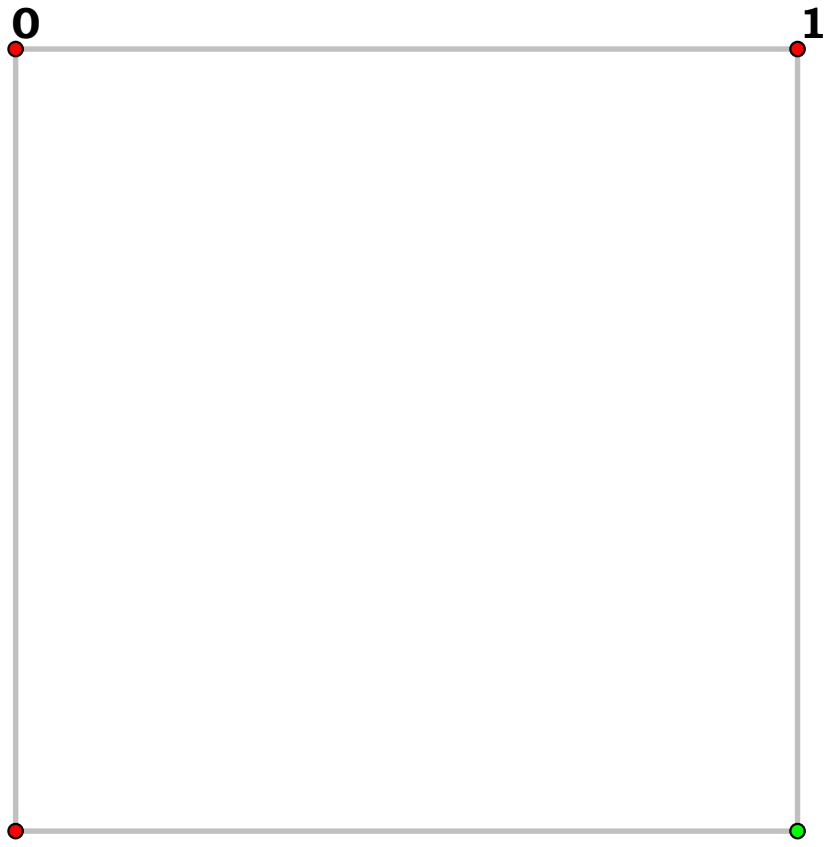
O = 5.01444

P = 4.33333

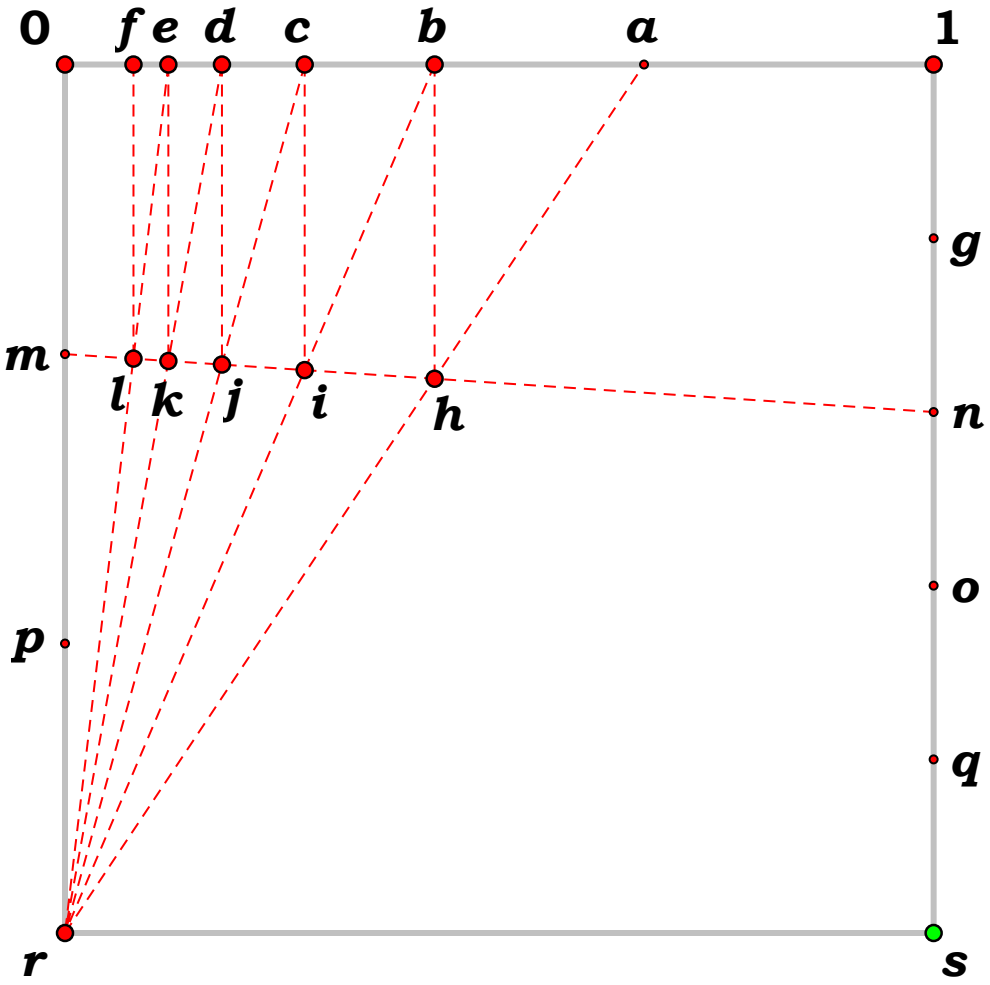
Unit **= 1.00000**

1 = 1.00000

0 = 0.00000



Unit = 1.00000
1 = 1.00000
0 = 0.00000
a = 0.66667
b = 0.42553
c = 0.27586
d = 0.18059
e = 0.11896
f = 0.07868



$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.66667$

$b = 0.42553$

$c = 0.27586$

$d = 0.18059$

$e = 0.11896$

$f = 0.07868$

$\frac{2}{3} = 0.66667$

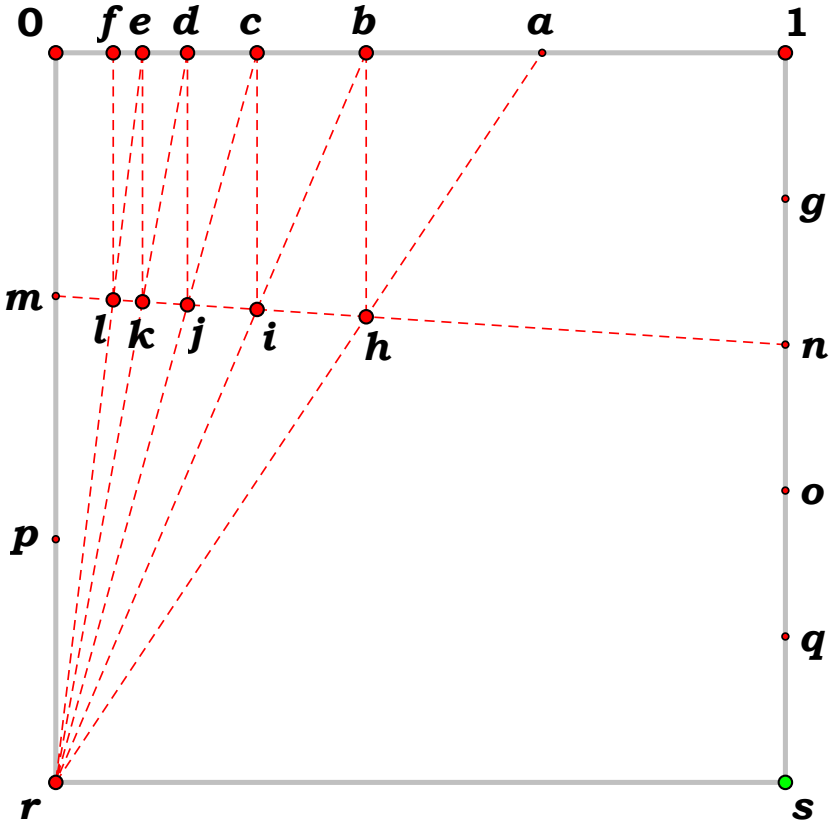
$\frac{20}{47} = 0.42553$

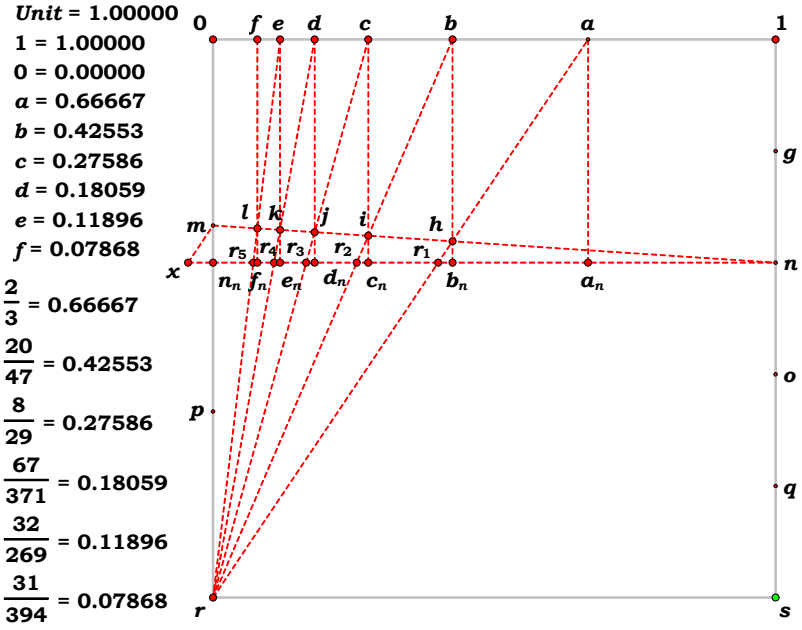
$\frac{8}{29} = 0.27586$

$\frac{67}{371} = 0.18059$

$\frac{32}{269} = 0.11896$

$\frac{31}{394} = 0.07868$





Given:

$a := .66666 \quad b := 5 \quad c := 2$

$d := 3 \quad e := 1 \quad n := \frac{c}{b} \quad m := \frac{e}{d}$

Descriptions:

$an := n \quad mn := n - m \quad ar := \sqrt{a^2 + 1}$

$ar1 := a^2(1 - n) \quad nnx := a \cdot mn$

$nx := 1 + nnx \quad nr1 := 1 - a + ar1$

$bnr1 := \frac{nnx \cdot nr1}{nx} \quad b := 1 - nr1 + bnr1$

$b = 0.42553$

Definitions

$an - n = 0 \quad mn - (n - m) = 0 \quad ar - \sqrt{a^2 + 1} = 0$

$ar1 - a^2(1 - n) = 0 \quad nnx - a \cdot (n - m) = 0$

$nx - (a \cdot n - a \cdot m + 1) = 0$

$nr1 - \left(a^2 - a^2 \cdot n - a + 1\right) = 0$

$bnr1 - \frac{a \cdot (n - m) \cdot \left(a^2 - a^2 \cdot n - a + 1\right)}{(a \cdot n - a \cdot m + 1)} = 0 \quad b - \frac{a^2 - a^2 \cdot n - a + a \cdot m - a \cdot n}{a \cdot m - a \cdot n - 1} = 0$

$b - \frac{a \cdot (n - m + 1) - (1 - n) \cdot a^2}{1 - (m - n) \cdot a} = 0$

$Unit = 1.00000$

$1 = 1.00000$

$0 = 0.00000$

$a = 0.66667$

$b = 0.42553$

$c = 0.27586$

$d = 0.18059$

$e = 0.11896$

$f = 0.07868$

$\frac{2}{3} = 0.66667$

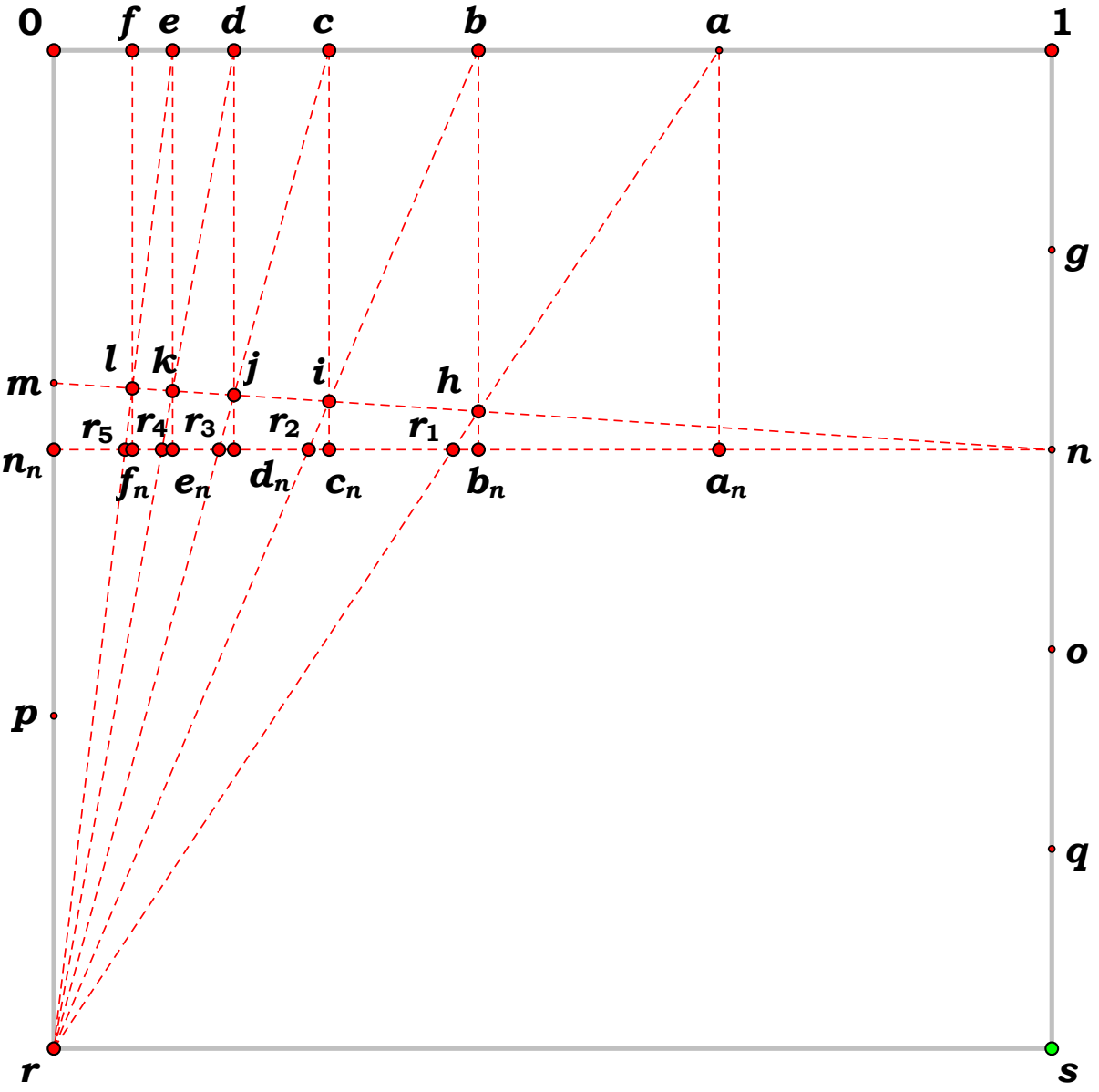
$\frac{20}{47} = 0.42553$

$\frac{8}{29} = 0.27586$

$\frac{67}{371} = 0.18059$

$\frac{32}{269} = 0.11896$

$\frac{31}{394} = 0.07868$



$a \cdot (n - m + 1) - a^2 \cdot (1 - n) = 0.44444$

$(1 - a \cdot (m - n)) = 1.04444$

$n = 0.40000$

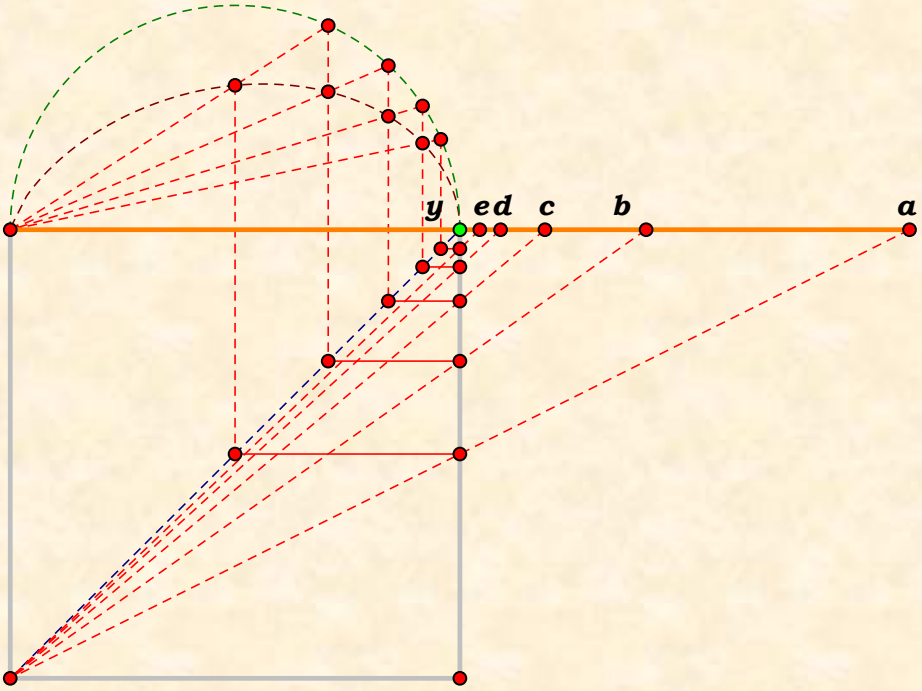
$m = 0.33333$

$$\frac{a \cdot (n - m + 1) - a^2 \cdot (1 - n)}{1 - a \cdot (m - n)} = 0.42553$$

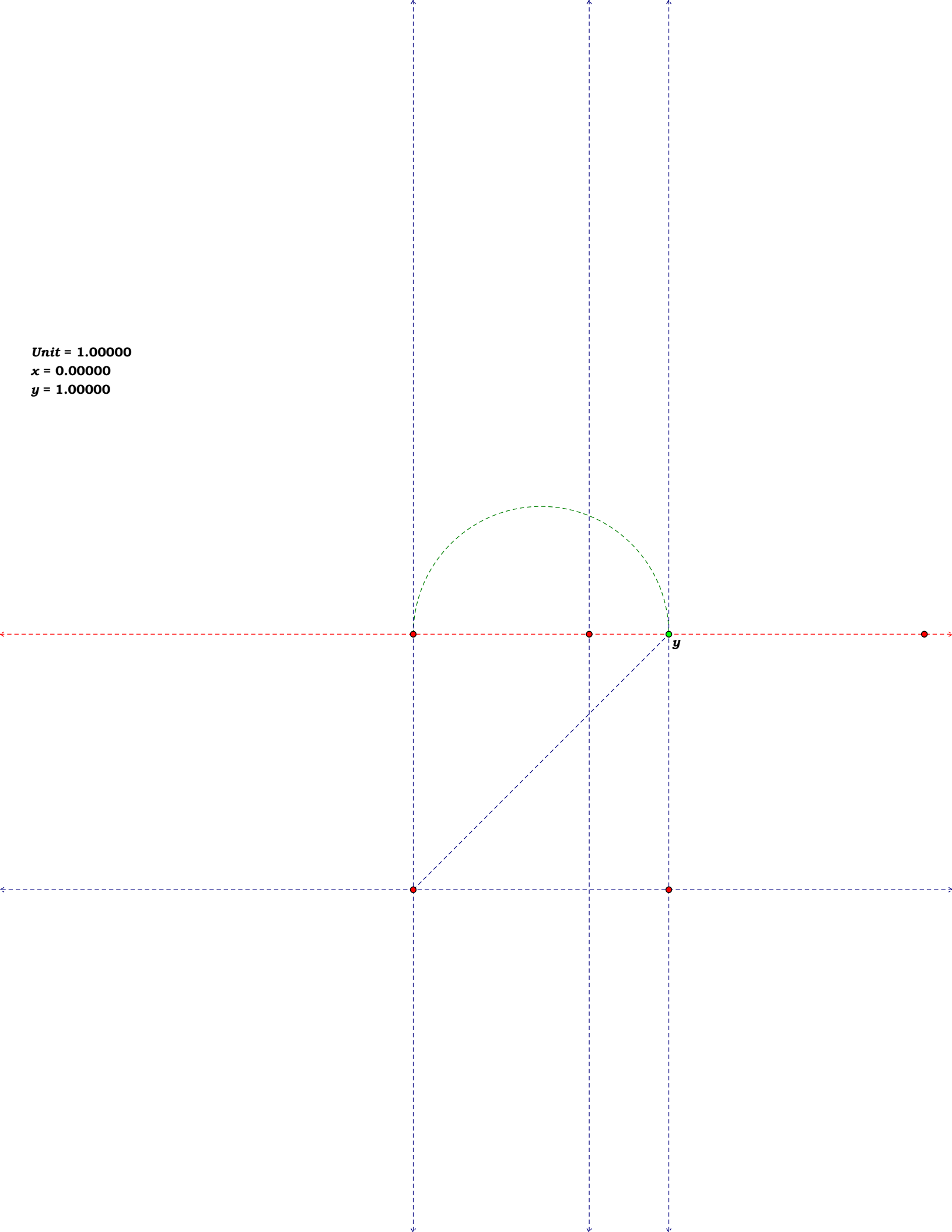
Geometric Series

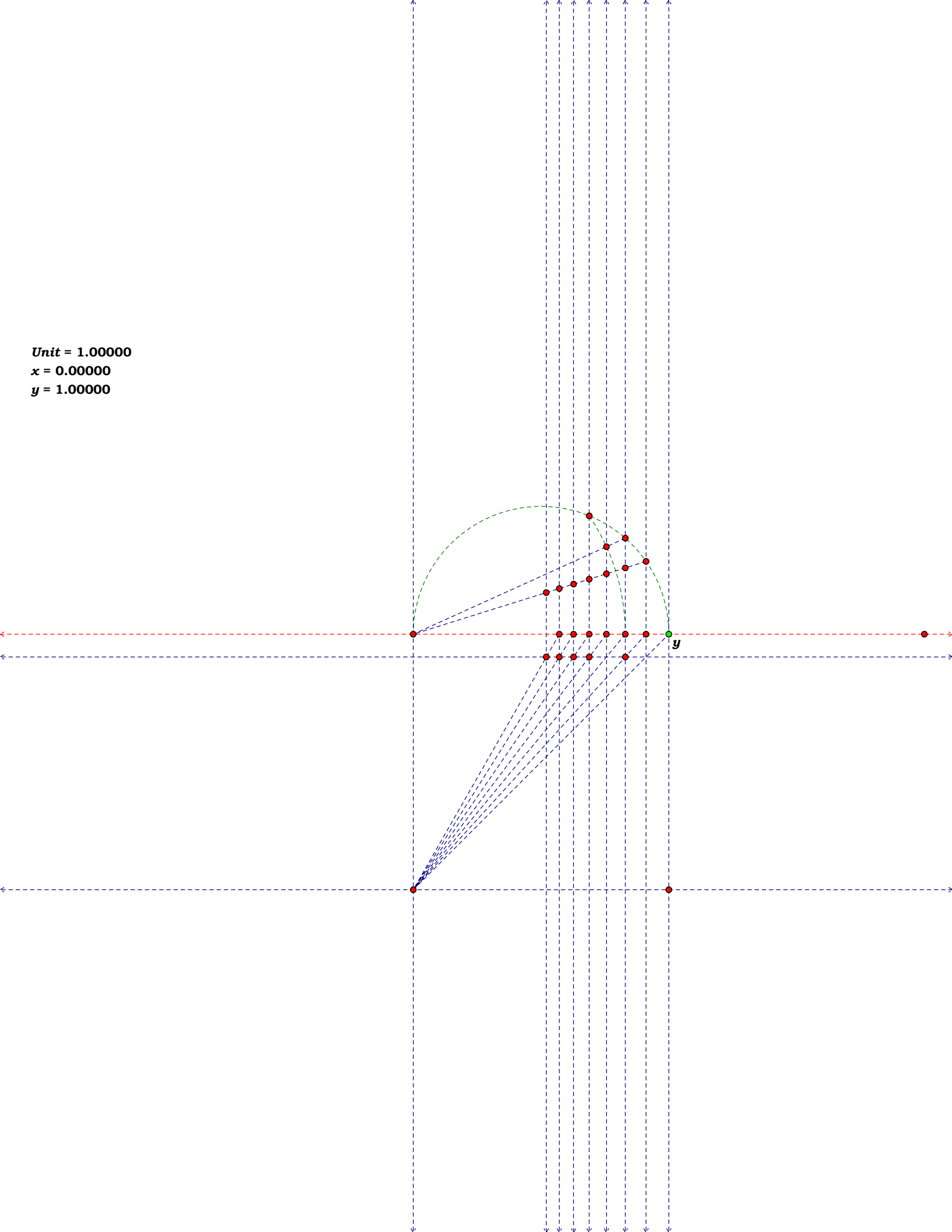
$a = 2.00000$
$b = 1.41421$
$c = 1.18921$
$d = 1.09051$
$e = 1.04427$

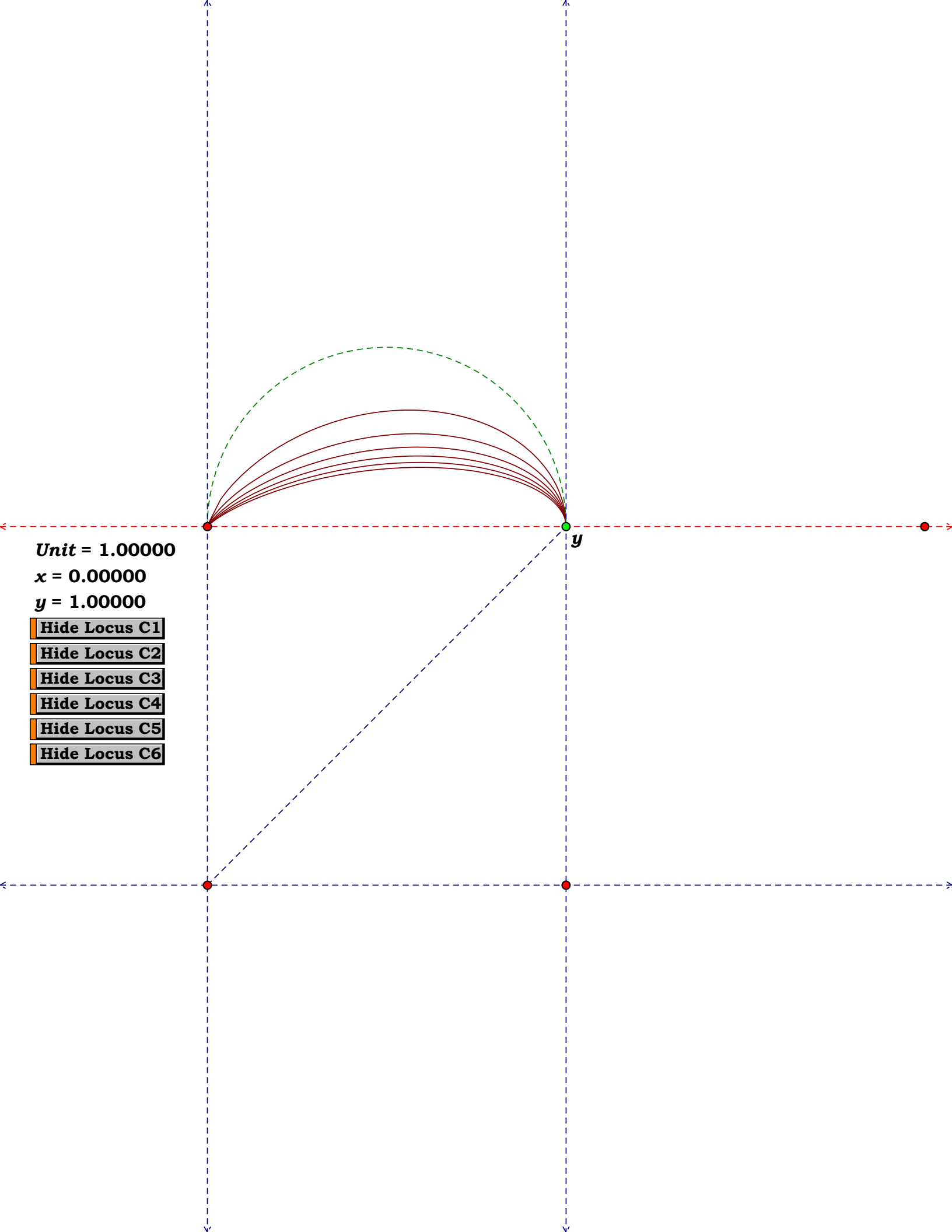
$a^{\frac{1}{2}} - b = 0.00000$
$a^{\frac{1}{4}} - c = 0.00000$
$a^{\frac{1}{8}} - d = 0.00000$
$a^{\frac{1}{16}} - e = 0.00000$

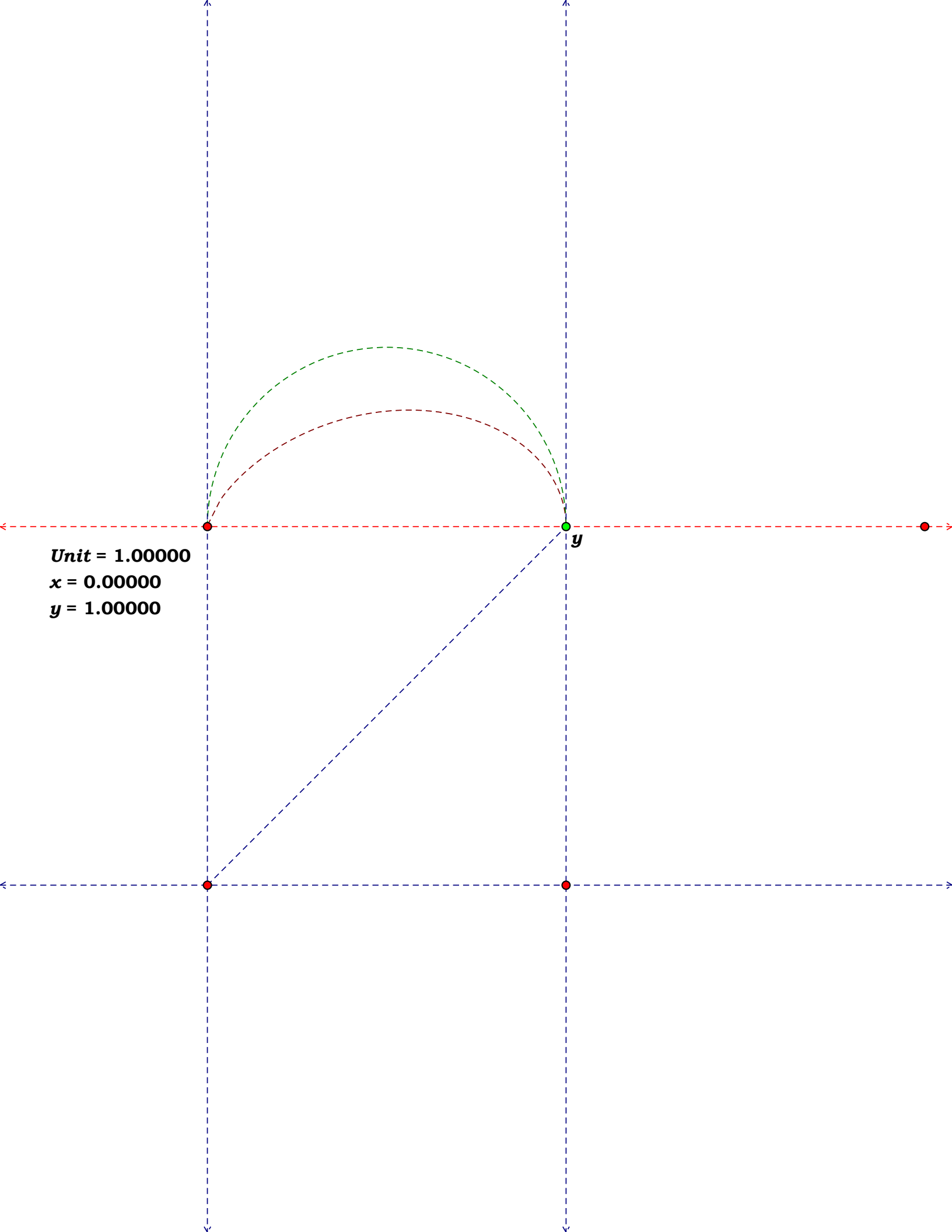


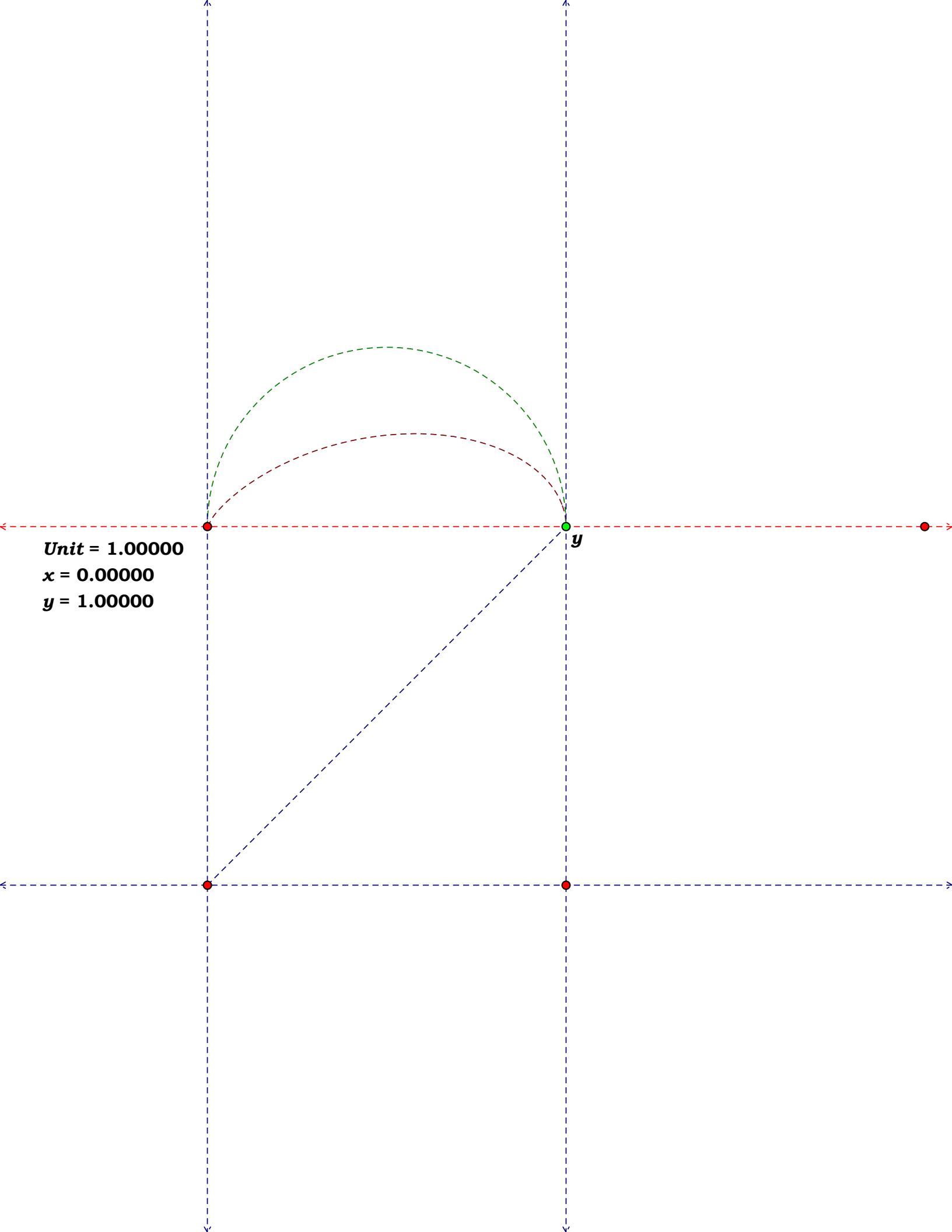
Template File

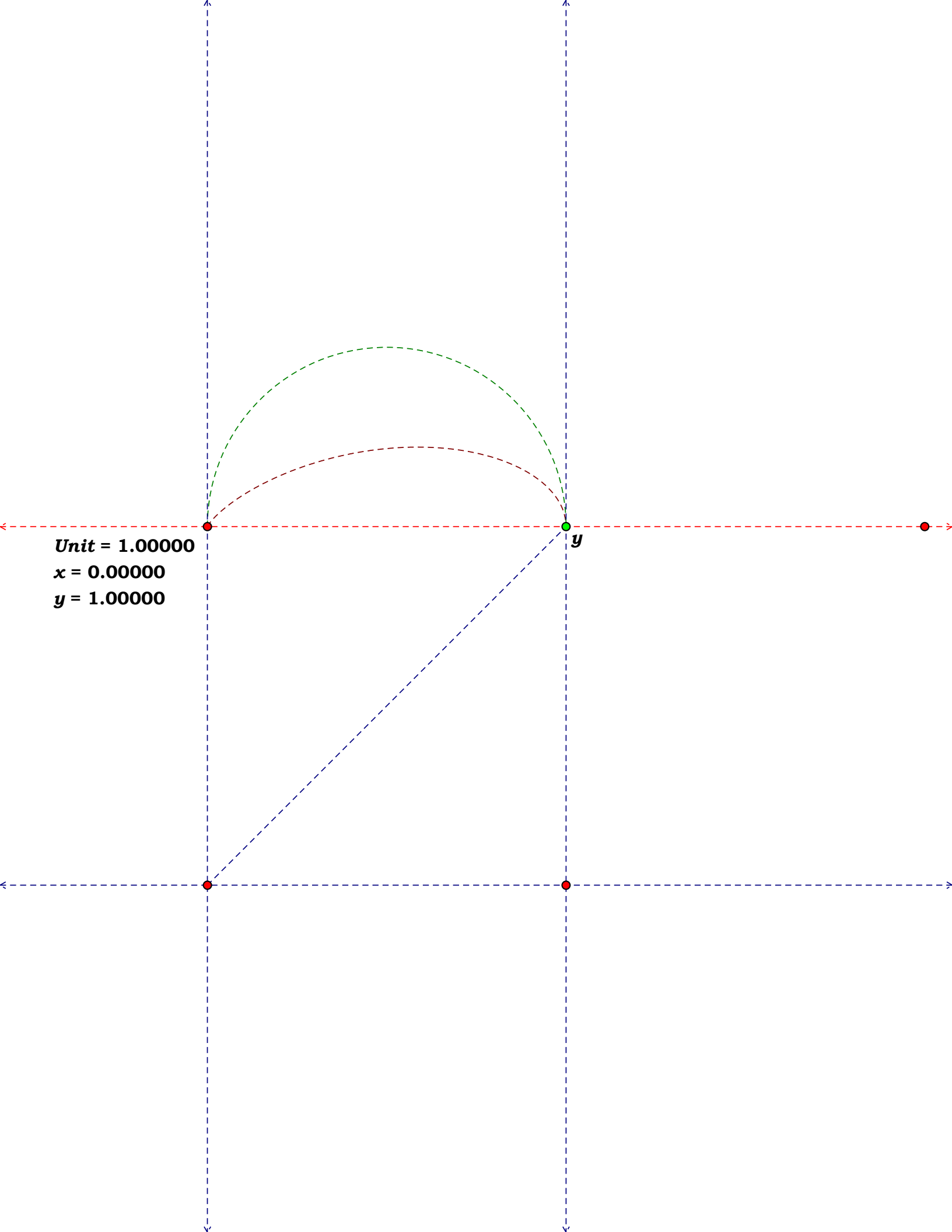

Unit = 1.00000
x = 0.00000
y = 1.00000
y

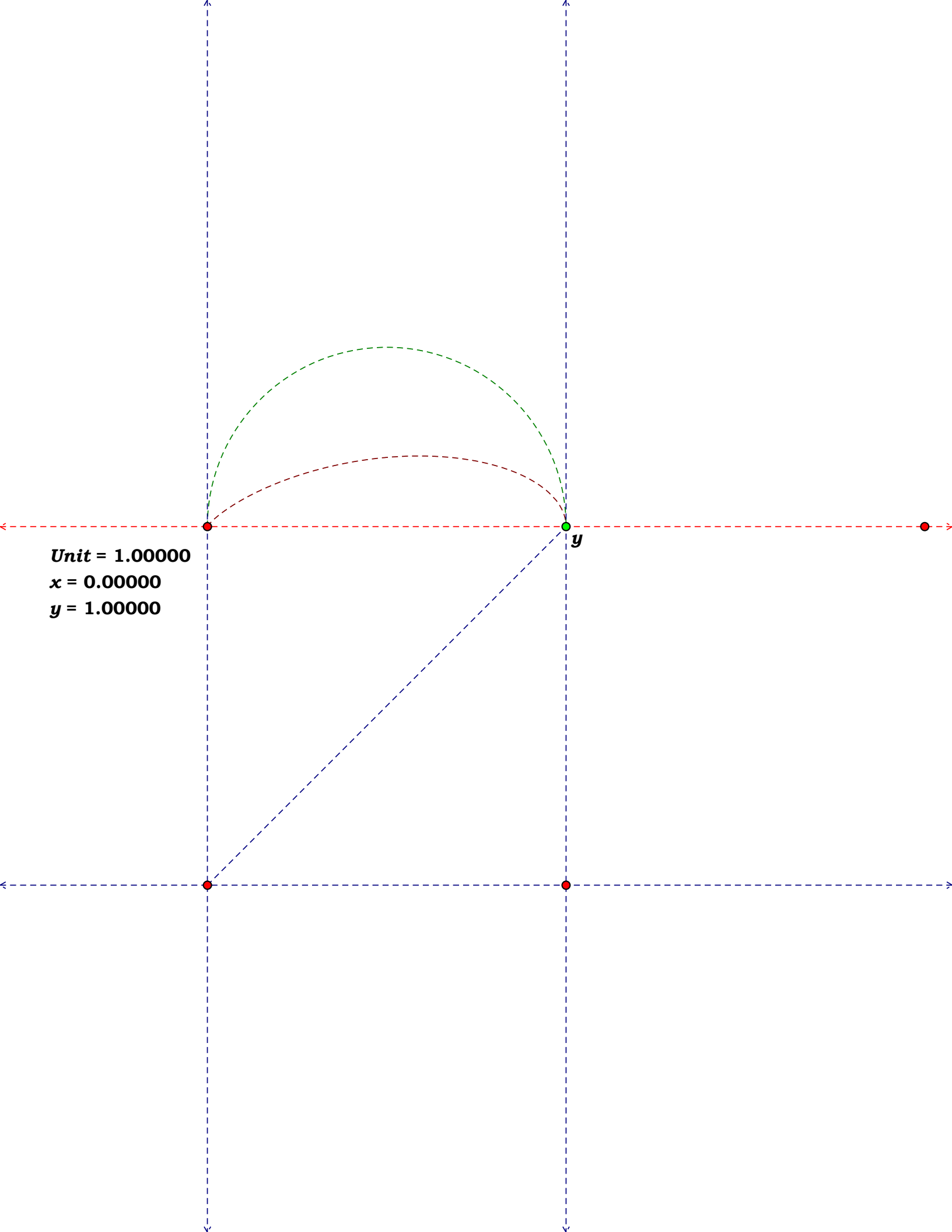

Unit = 1.00000
x = 0.00000
y = 1.00000
y

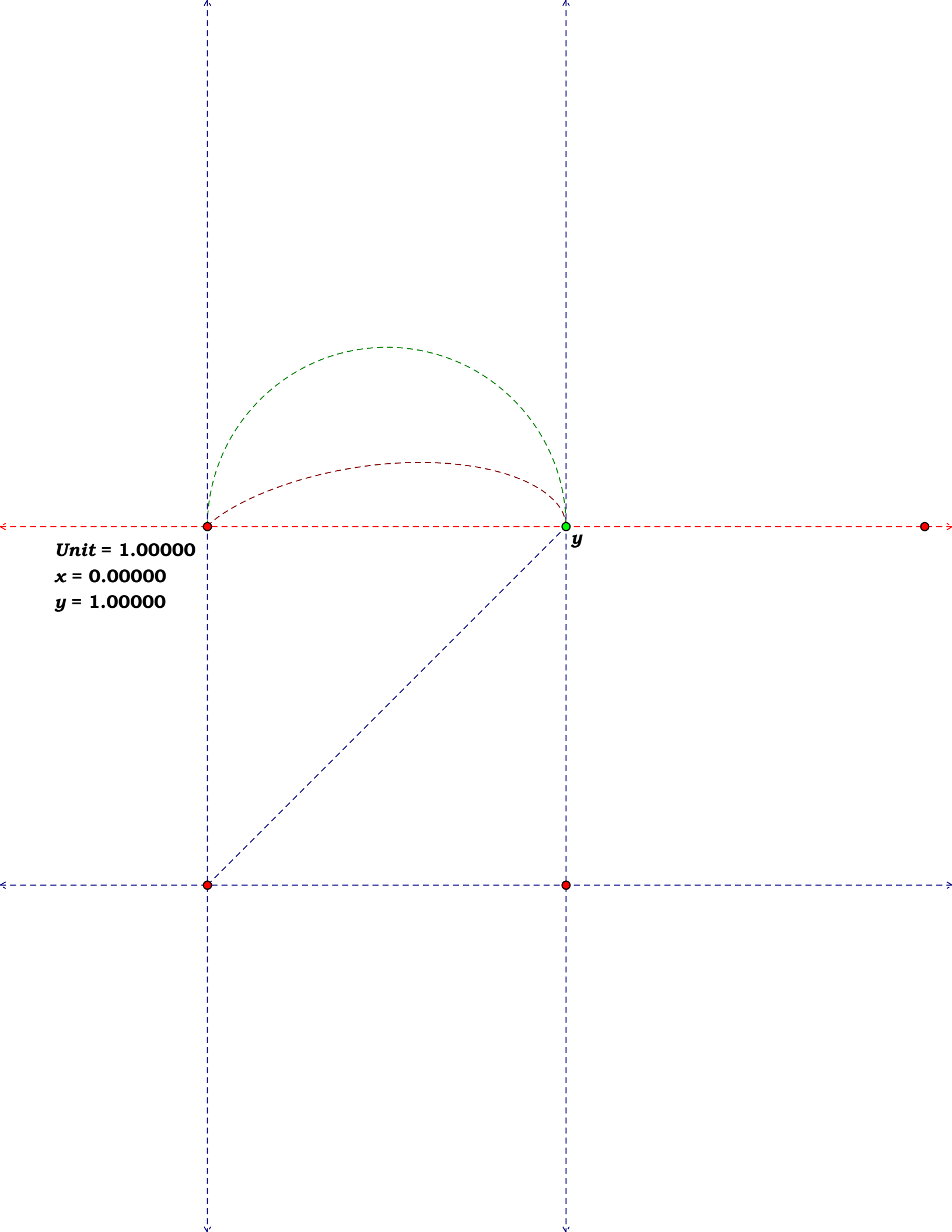

y
Unit = 1.00000
x = 0.00000
y = 1.00000
Hide Locus C1
Hide Locus C2
Hide Locus C3
Hide Locus C4
Hide Locus C5
Hide Locus C6

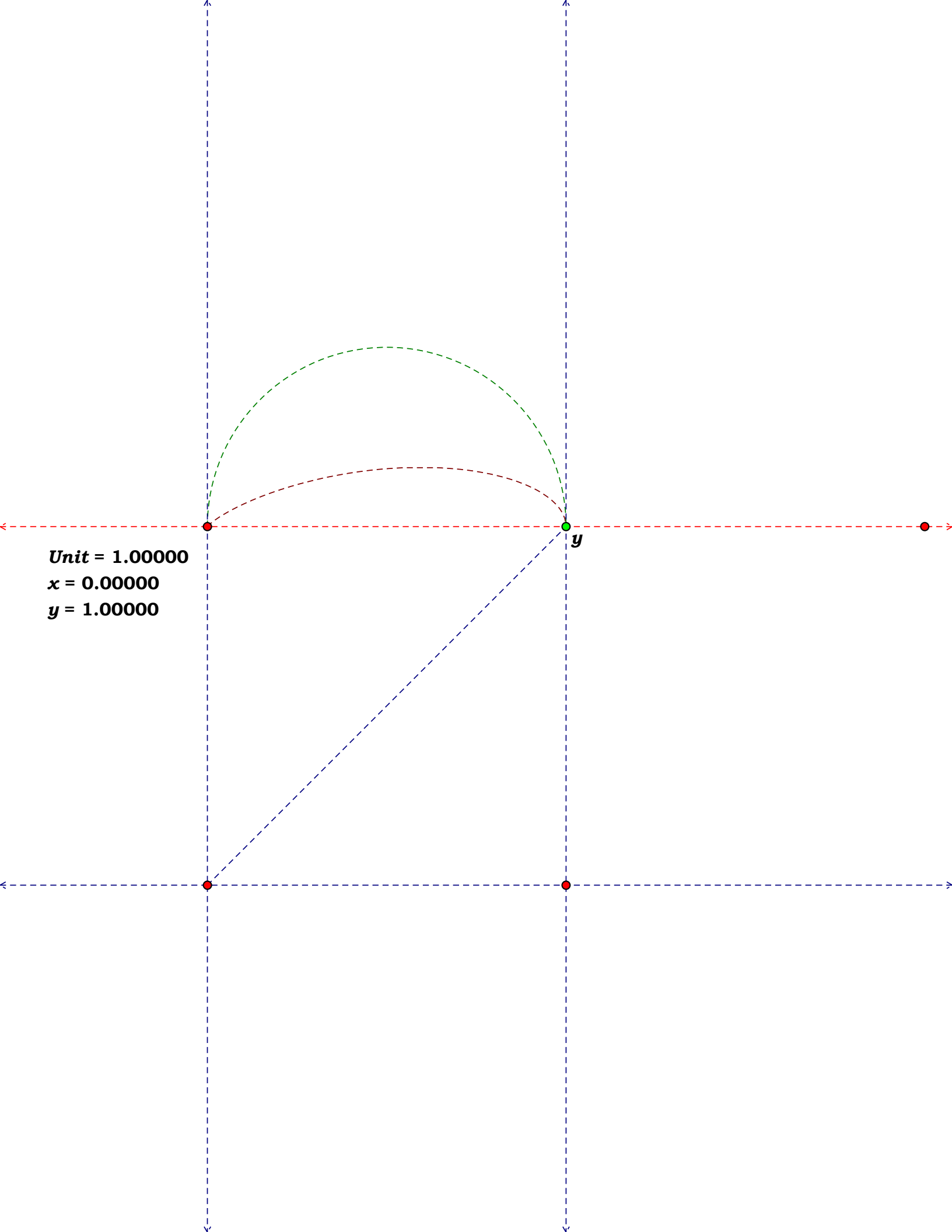

y
Unit = 1.00000
x = 0.00000
y = 1.00000


y
Unit = 1.00000
x = 0.00000
y = 1.00000


y
Unit = 1.00000
x = 0.00000
y = 1.00000


y
Unit = 1.00000
x = 0.00000
y = 1.00000

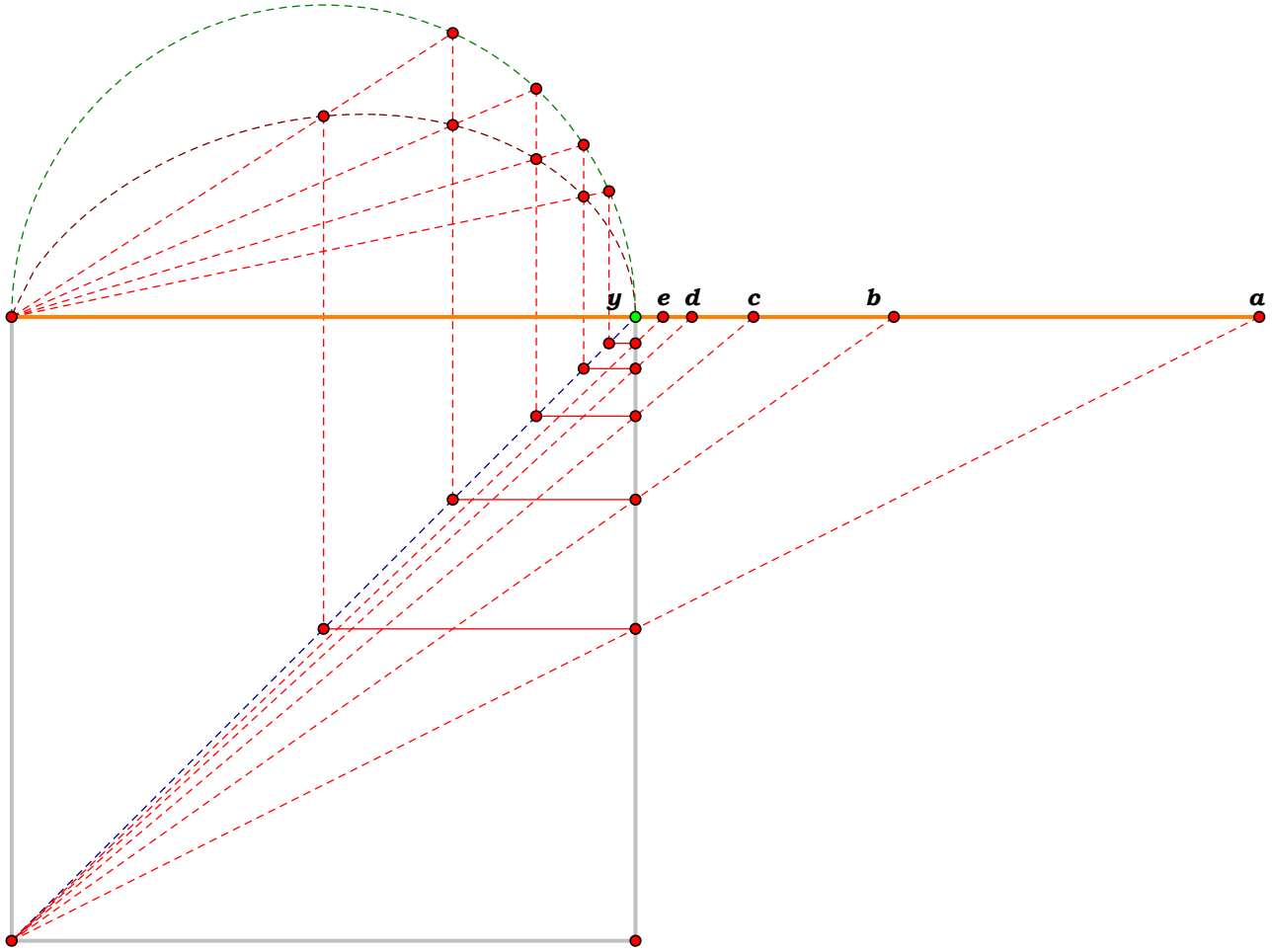

y
Unit = 1.00000
x = 0.00000
y = 1.00000


y
Unit = 1.00000
x = 0.00000
y = 1.00000

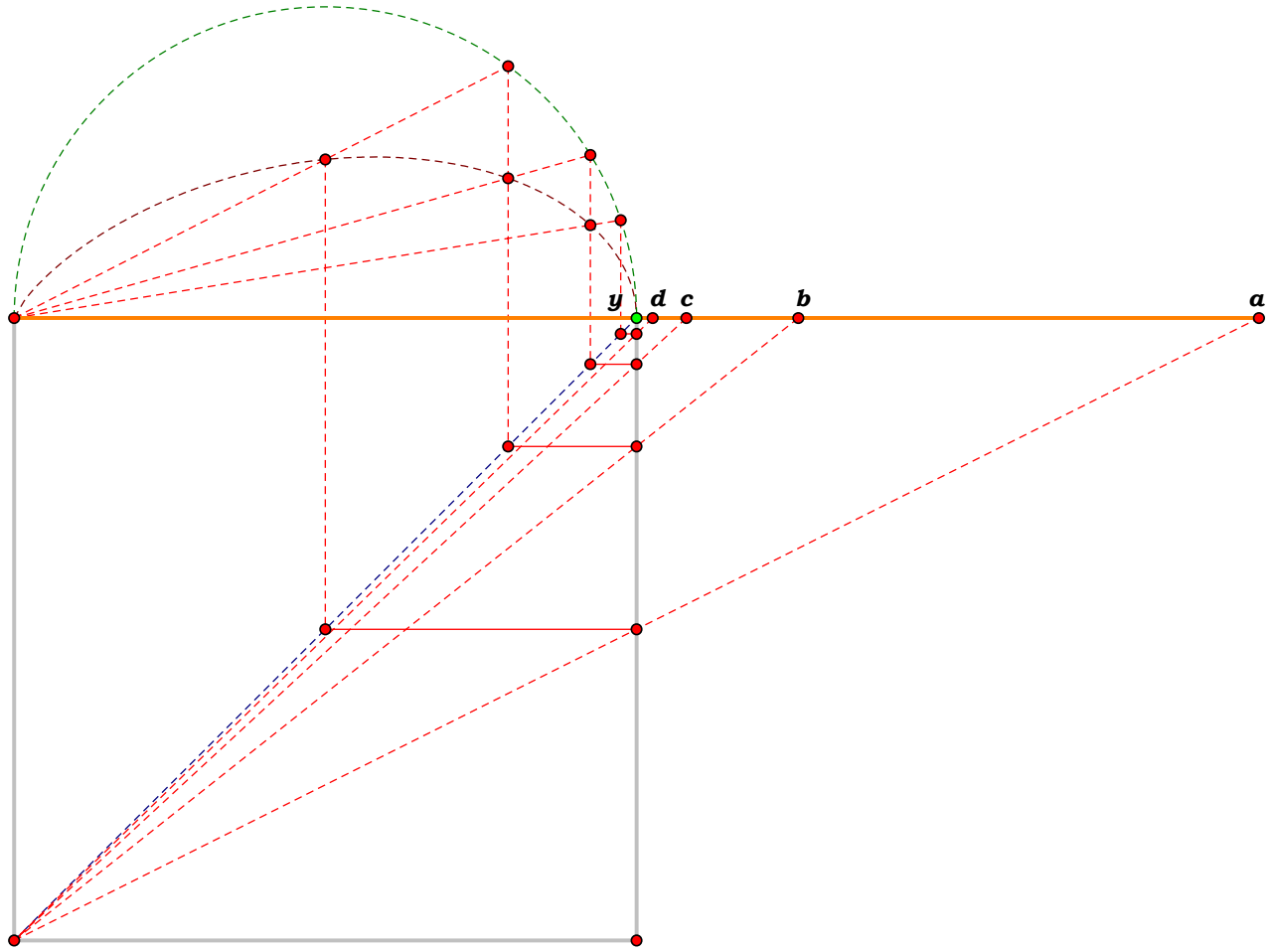
$Unit = 1.00000$
$x = 0.00000$
$y = 1.00000$

$a = 2.00000$
$b = 1.41421$
$c = 1.18921$
$d = 1.09051$
$e = 1.04427$

$a^{\frac{1}{2}} - b = 0.00000$
$a^{\frac{1}{4}} - c = 0.00000$
$a^{\frac{1}{8}} - d = 0.00000$
$a^{\frac{1}{16}} - e = 0.00000$



First Curve



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.25992$

$c = 1.08006$

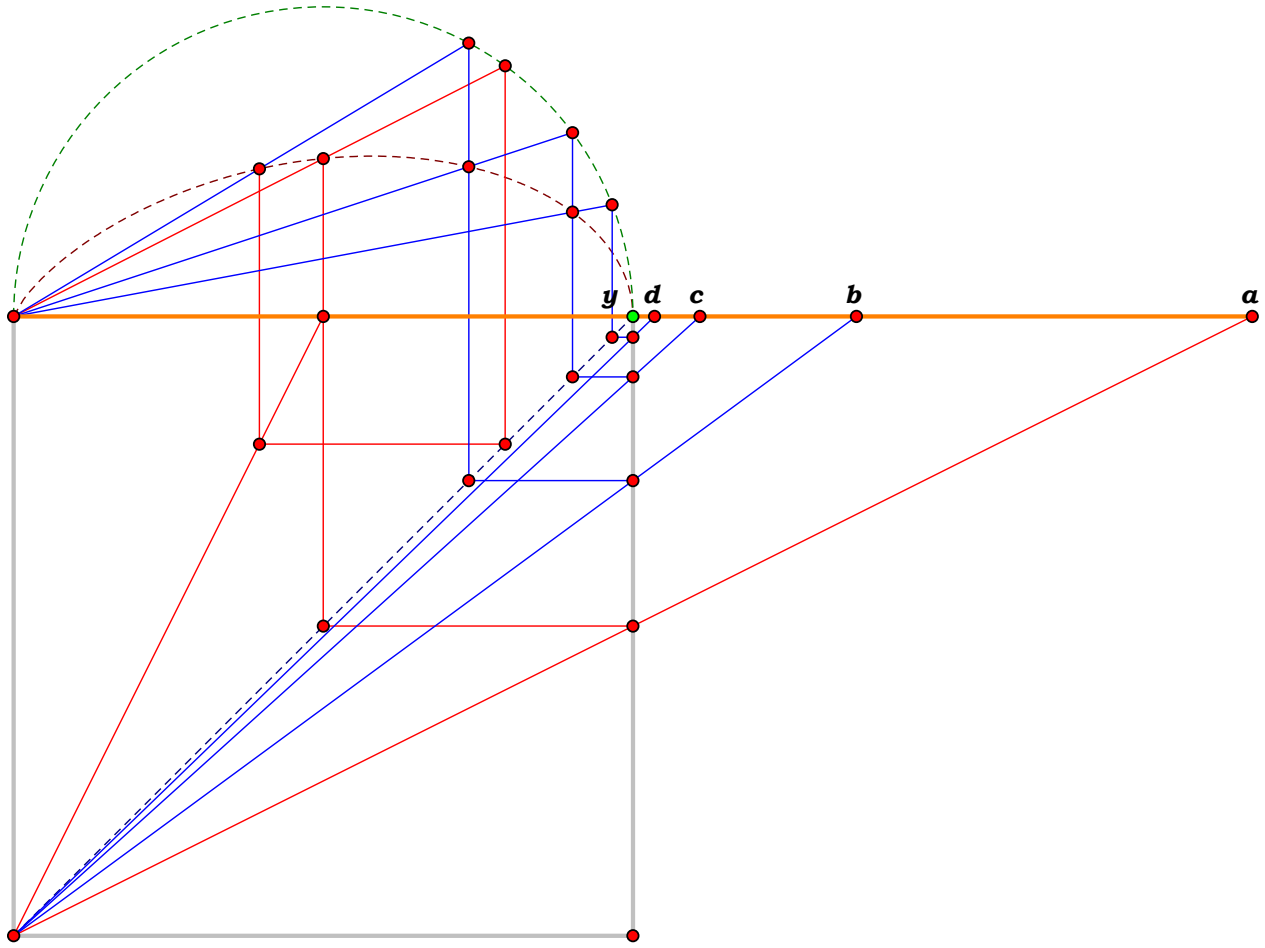
$d = 1.02600$

$a^{\frac{1}{3}} - b = 0.00000$

$a^{\frac{1}{9}} - c = 0.00000$

$a^{\frac{1}{27}} - d = 0.00000$

Second Curve



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.36079$

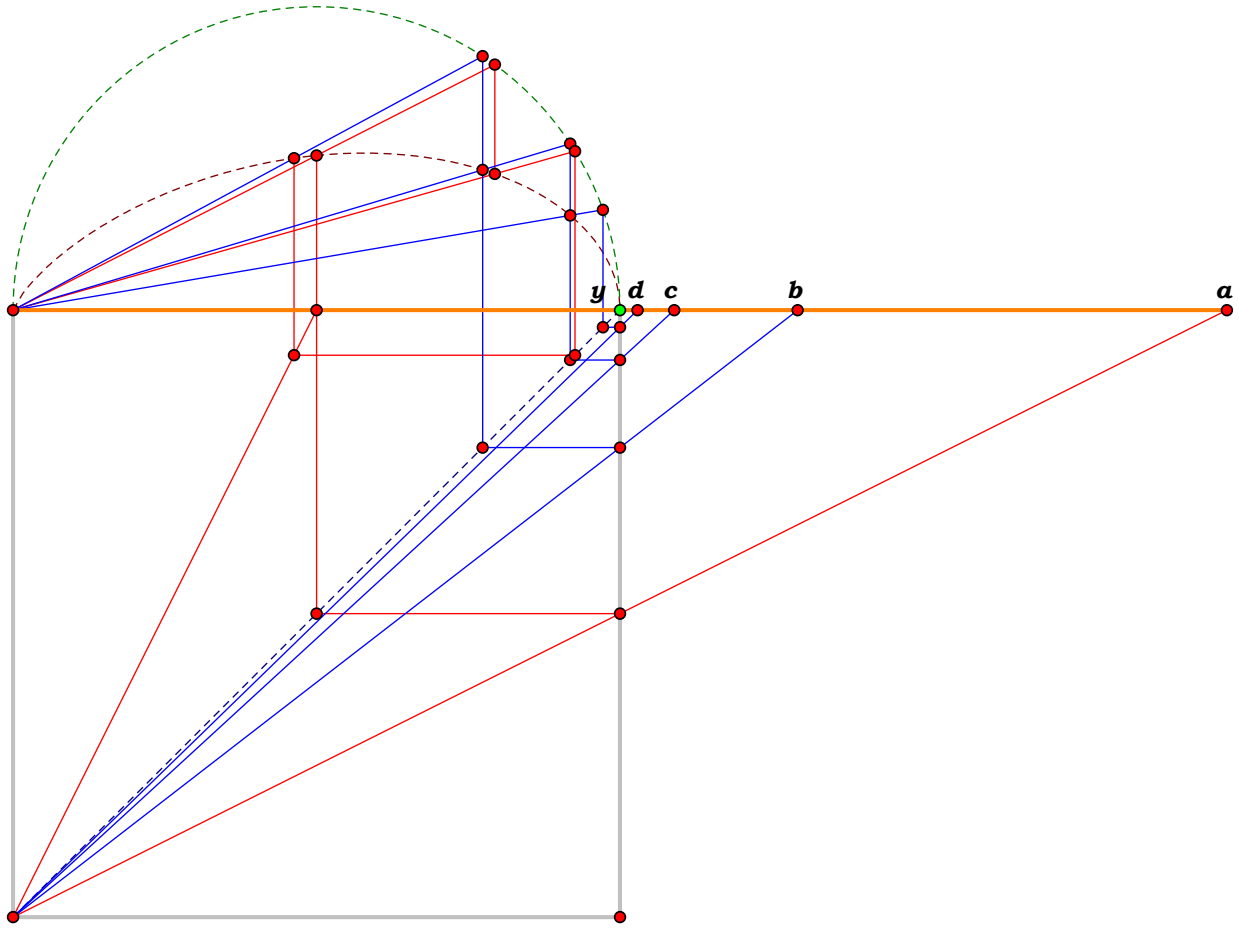
$c = 1.10815$

$d = 1.03482$

$a^{\frac{4}{9}} - b = 0.00000$

$a^{\frac{4}{27}} - c = 0.00000$

$a^{\frac{4}{81}} - d = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.29268$

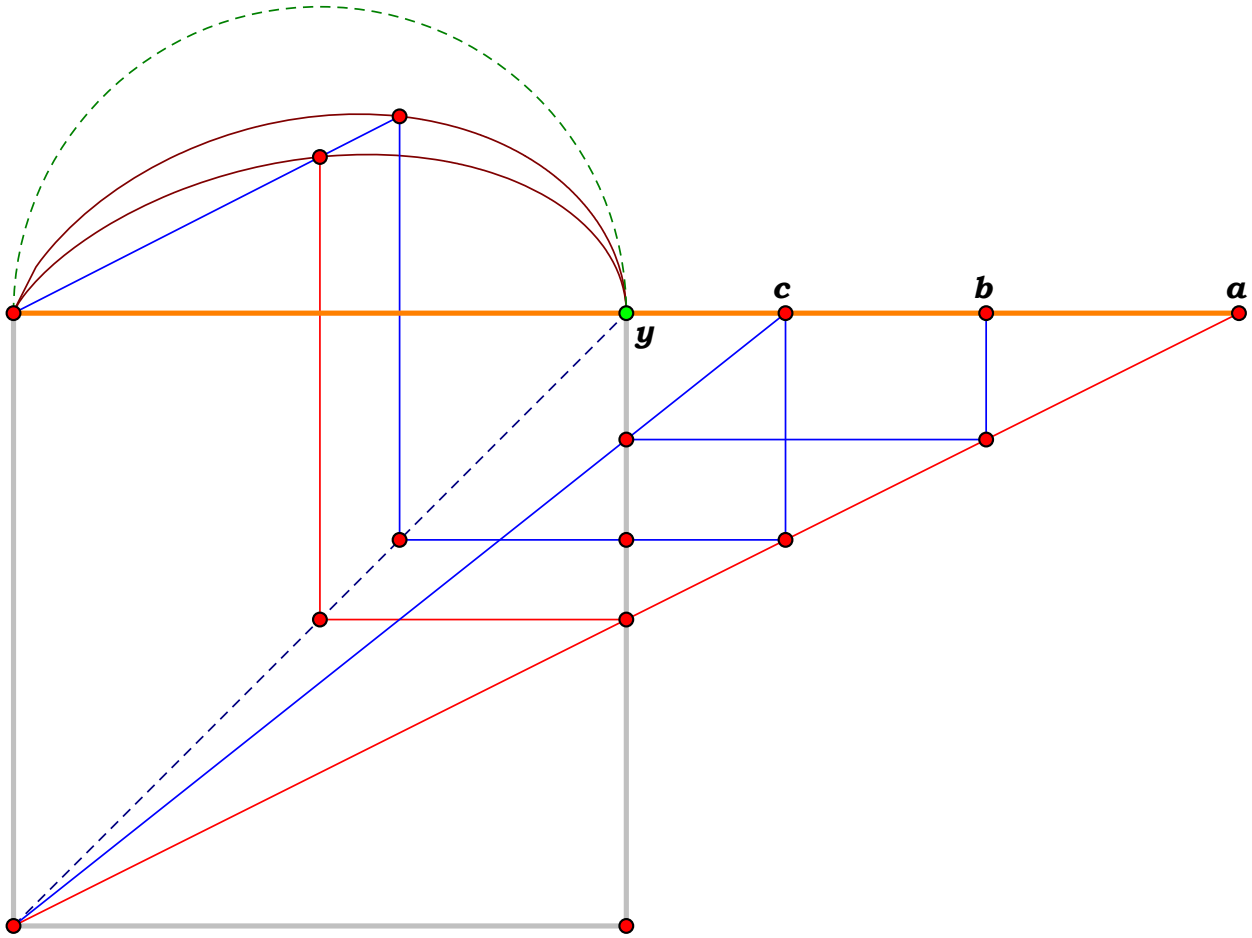
$c = 1.08934$

$d = 1.02894$

$a^{\frac{10}{27}} - b = 0.00000$

$a^{\frac{10}{81}} - c = 0.00000$

$a^{\frac{10}{243}} - d = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

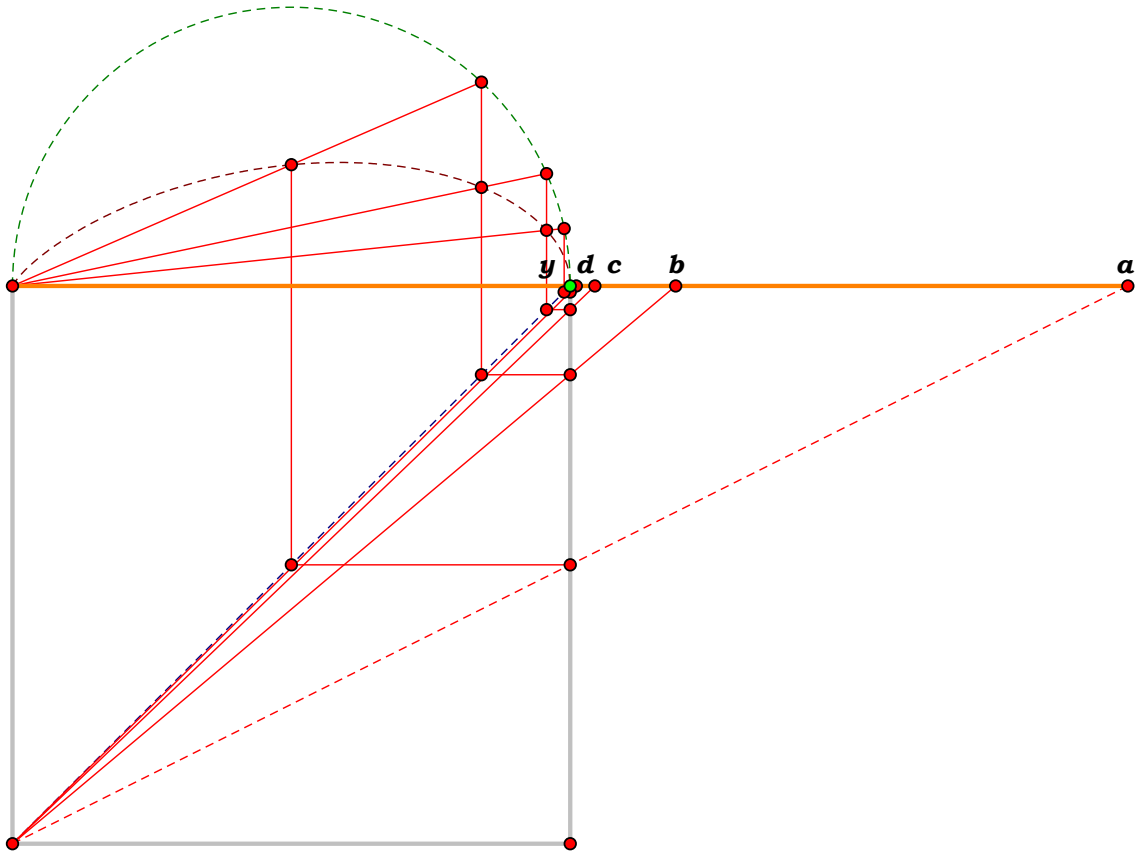
$b = 1.58740$

$c = 1.25992$

$a^{\frac{2}{3}} - b = 0.00000$

$a^{\frac{1}{3}} - c = 0.00000$

Two over three



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.18921$

$c = 1.04427$

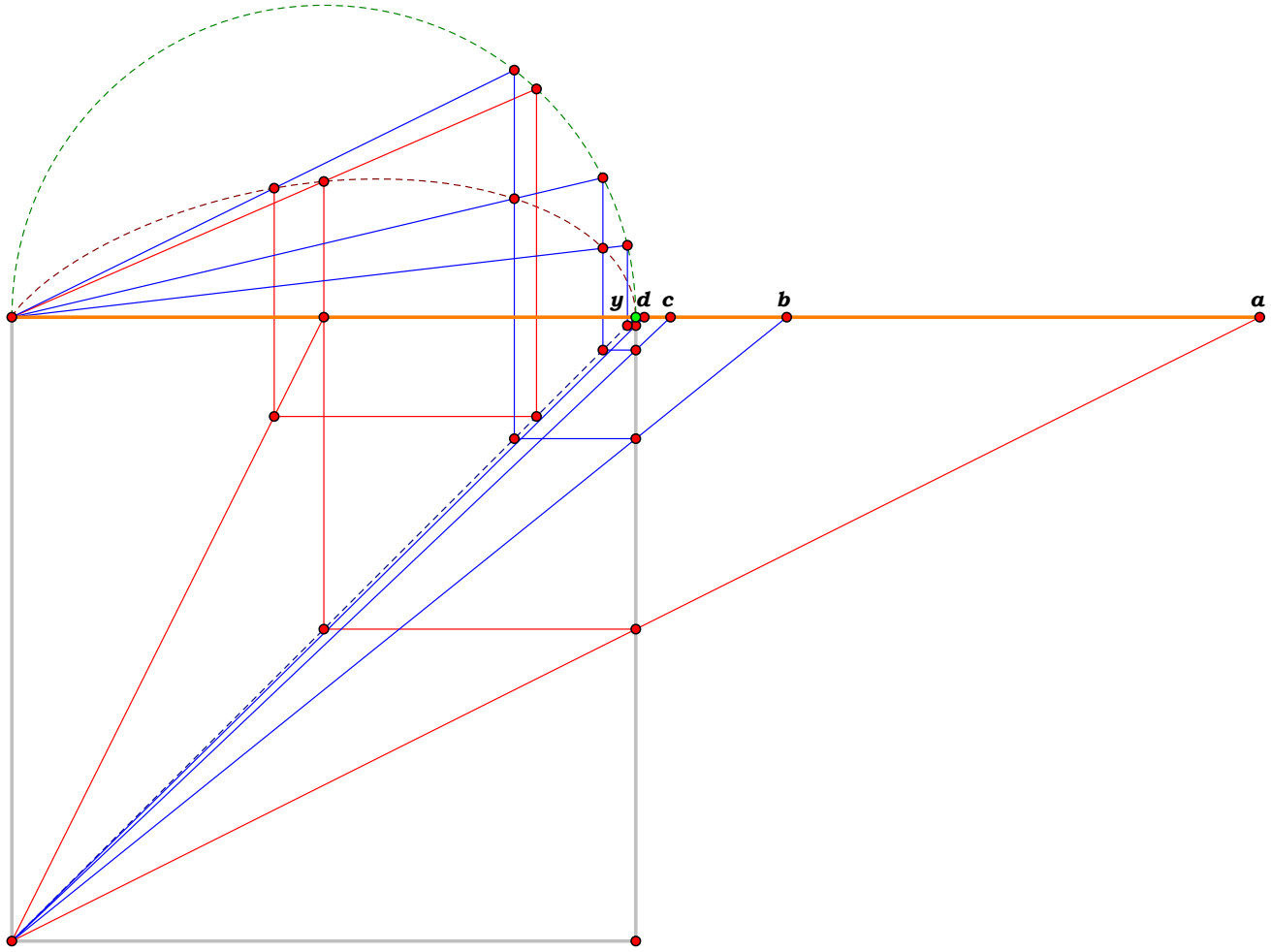
$x = 1.01089$

$a^{\frac{1}{4}} - b = 0.00000$

$a^{\frac{1}{16}} - c = 0.00000$

$a^{\frac{1}{64}} - x = 0.00000$

Third Curve



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.24186$

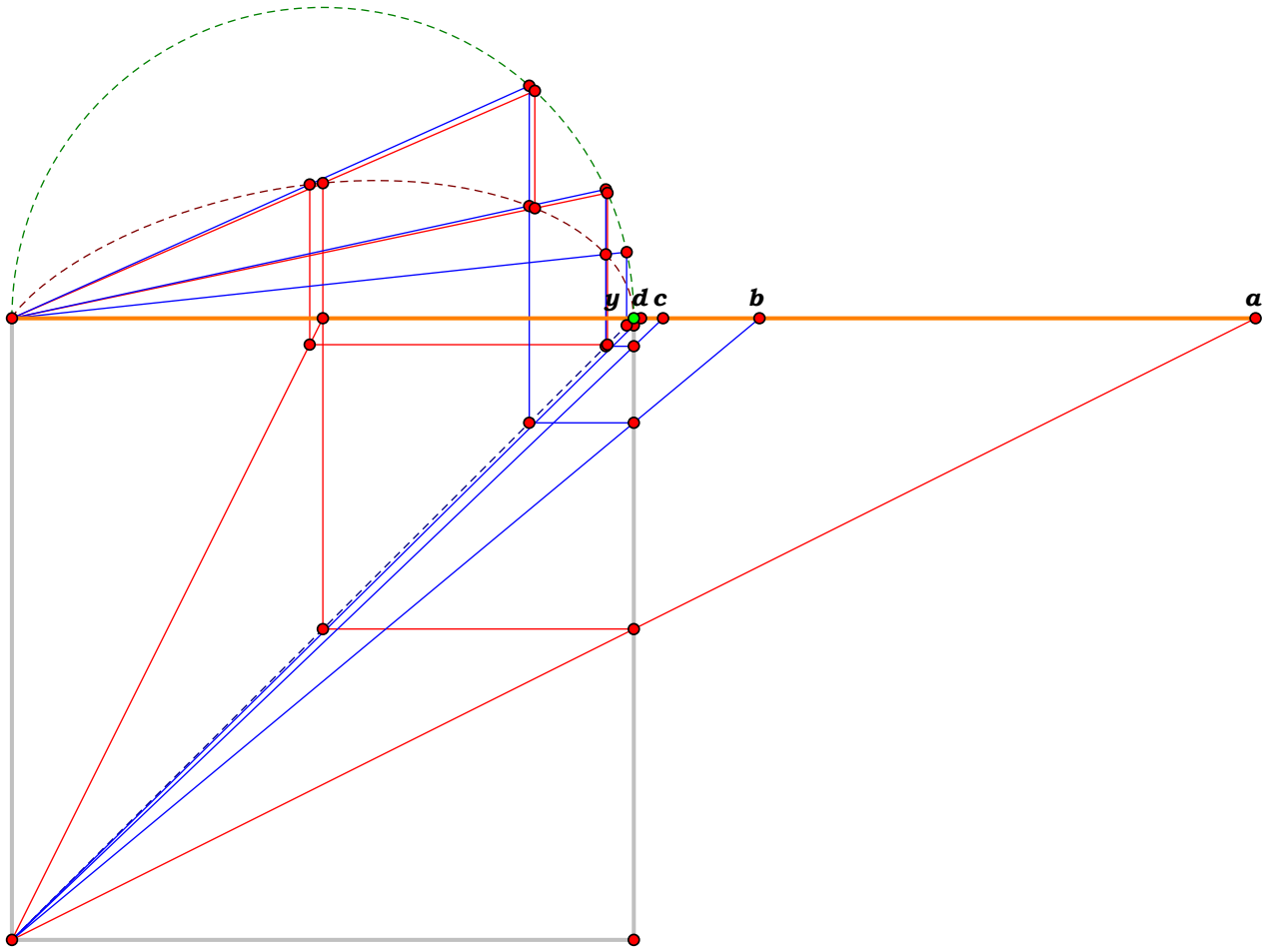
$c = 1.05565$

$d = 1.01363$

$a^{\frac{5}{16}} - b = 0.00000$

$a^{\frac{5}{64}} - c = 0.00000$

$a^{\frac{5}{256}} - d = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.20216$

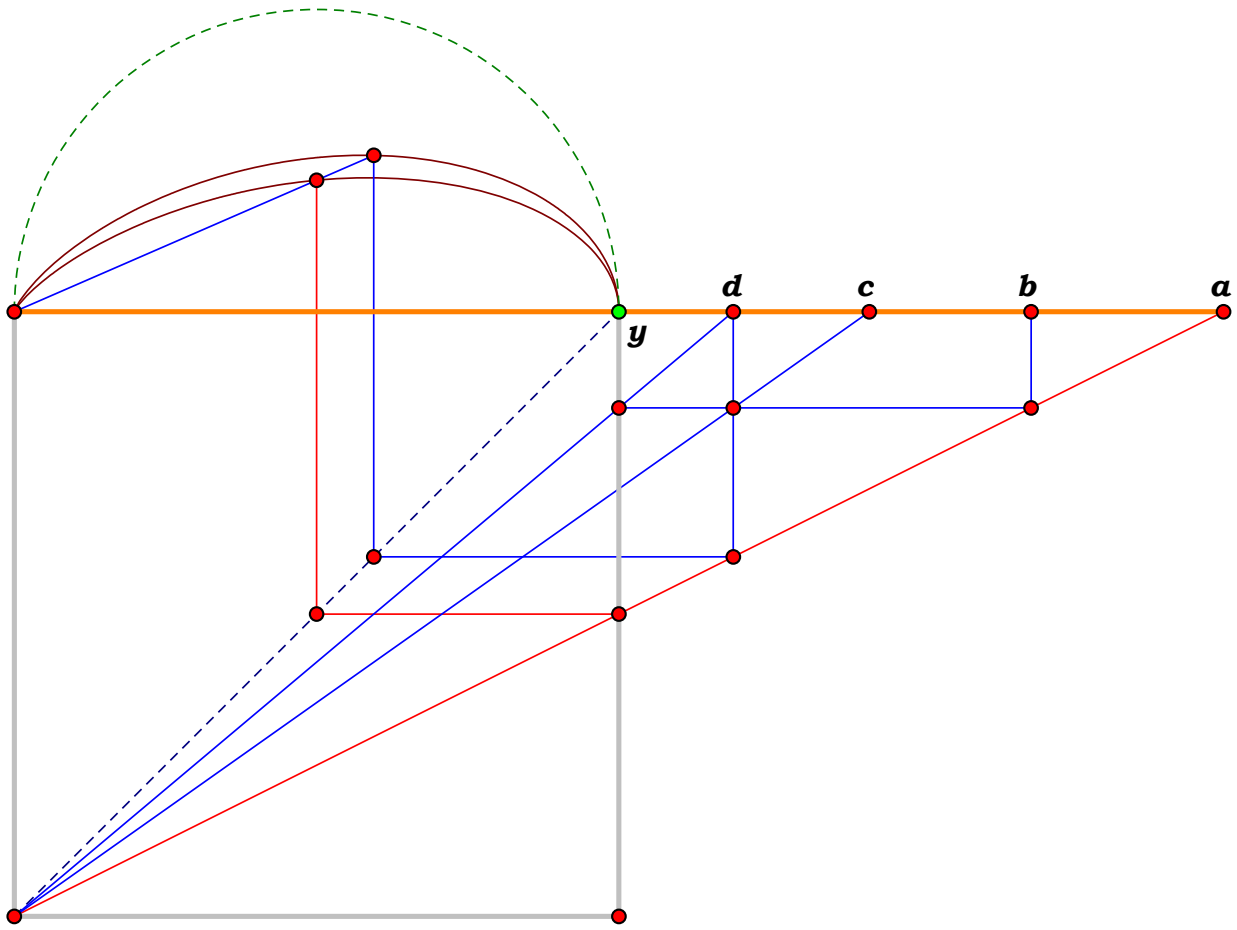
$c = 1.04711$

$d = 1.01157$

$a^{\frac{17}{64}} - b = 0.00000$

$a^{\frac{17}{256}} - c = 0.00000$

$a^{\frac{17}{1024}} - d = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.68179$

$c = 1.41421$

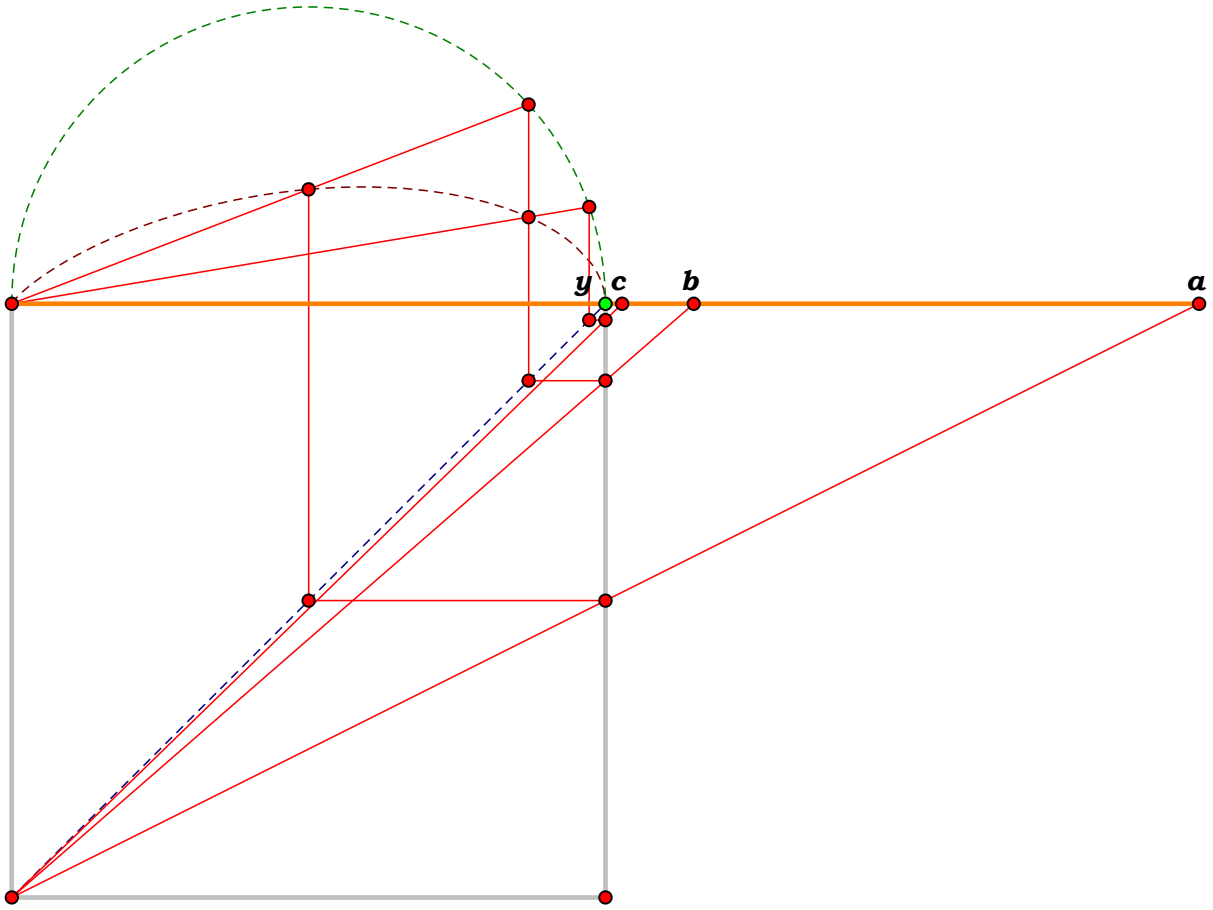
$d = 1.18921$

$a^{\frac{3}{4}} - b = 0.00000$

$a^{\frac{2}{4}} - c = 0.00000$

$a^{\frac{1}{4}} - d = 0.00000$

Two over three.



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

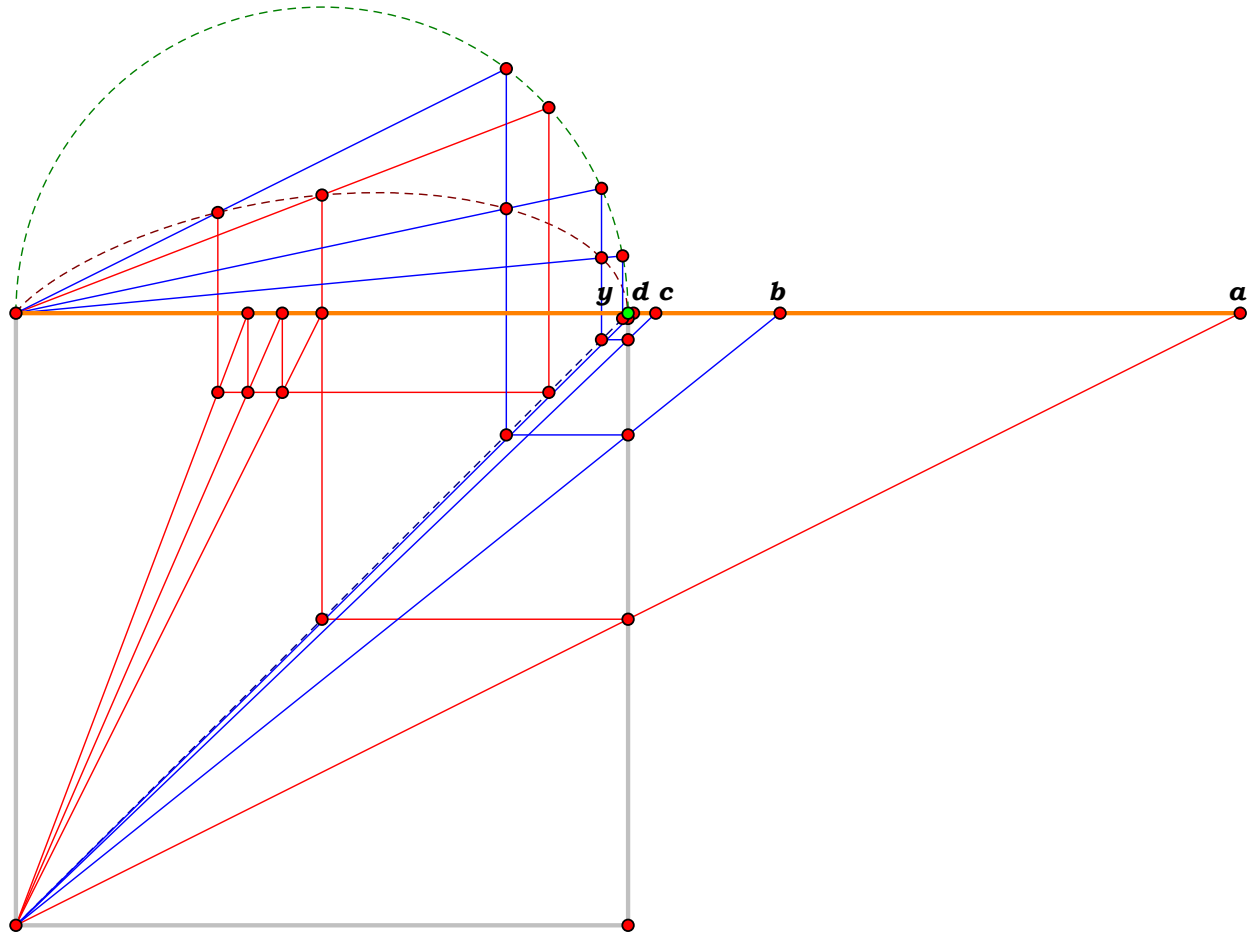
$b = 1.14870$

$c = 1.02811$

$a^{\frac{1}{5}} - b = 0.00000$

$a^{\frac{1}{25}} - c = 0.00000$

The Fourth Curve



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.24833$

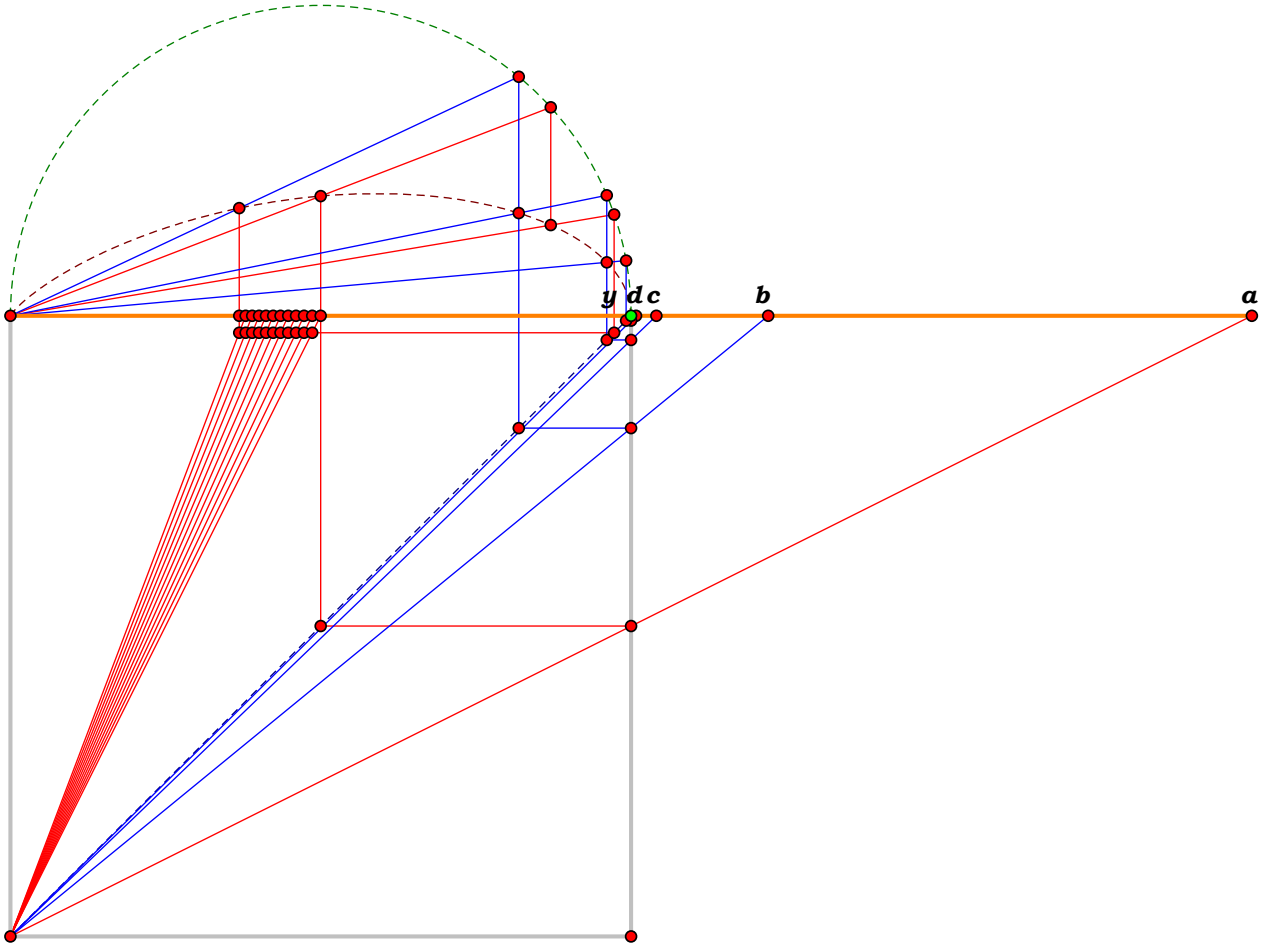
$c = 1.04536$

$d = 1.00891$

$a^{\frac{8}{25}} - b = 0.00000$

$a^{\frac{8}{125}} - c = 0.00000$

$a^{\frac{8}{625}} - d = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.22095$

$c = 1.04073$

$d = 1.00802$

$a^{\frac{36}{125}} - b = 0.00000$

$a^{\frac{36}{625}} - c = 0.00000$

$a^{\frac{36}{3125}} - d = 0.00000$

$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.74110$

$c = 1.51572$

$d = 1.31951$

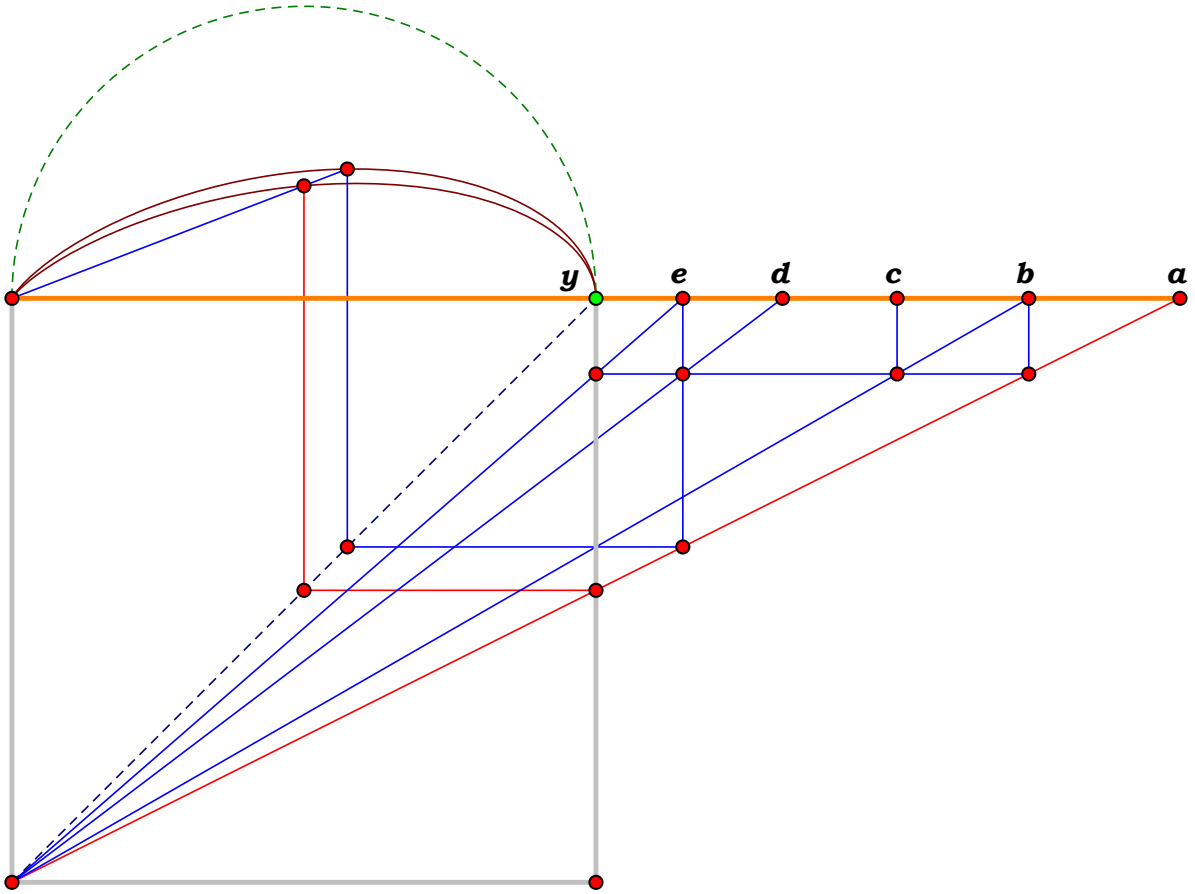
$e = 1.14870$

$a^{\frac{4}{5}} - b = 0.00000$

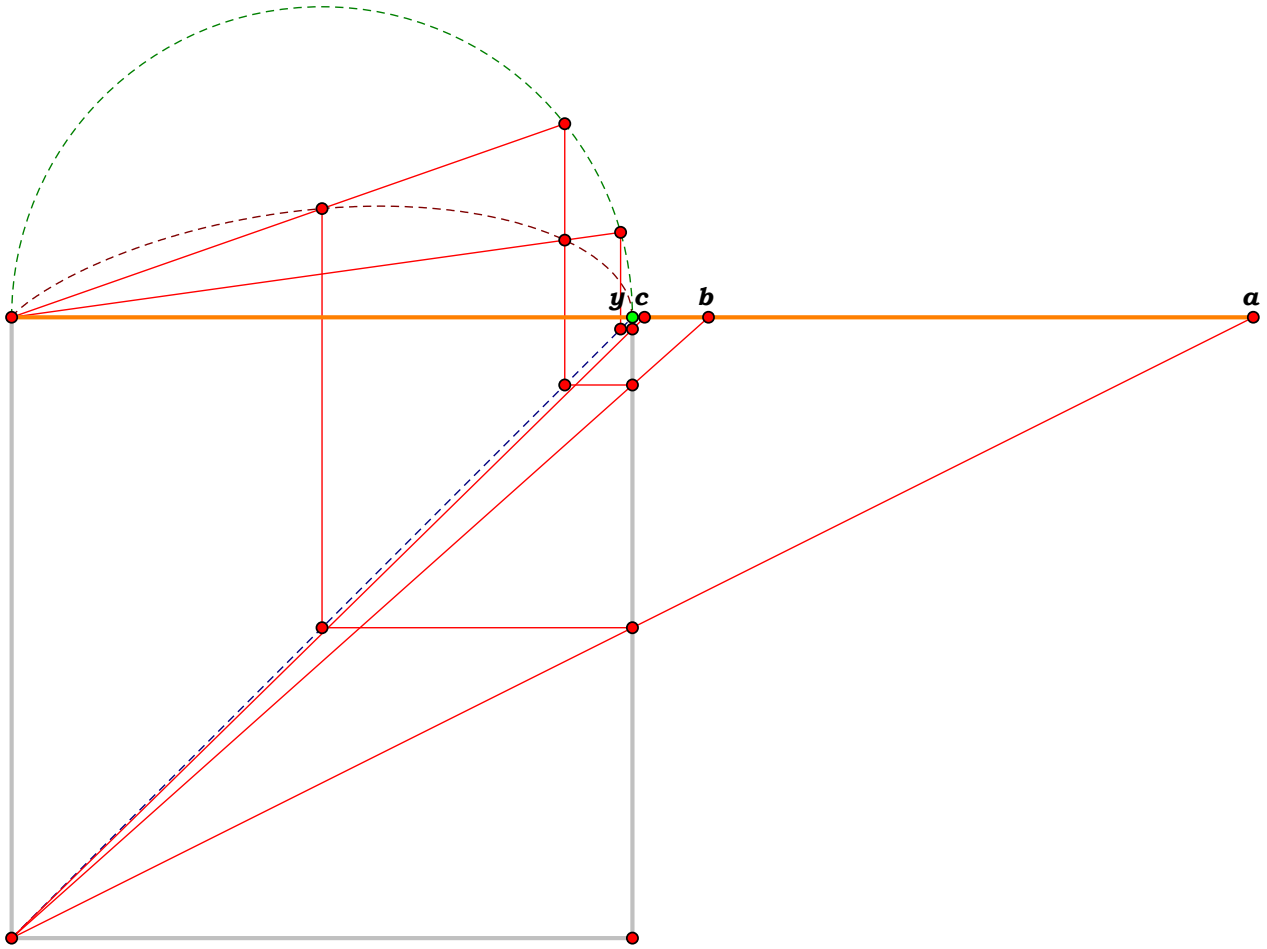
$a^{\frac{3}{5}} - c = 0.00000$

$a^{\frac{2}{5}} - d = 0.00000$

$a^{\frac{1}{5}} - e = 0.00000$



Three over four



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

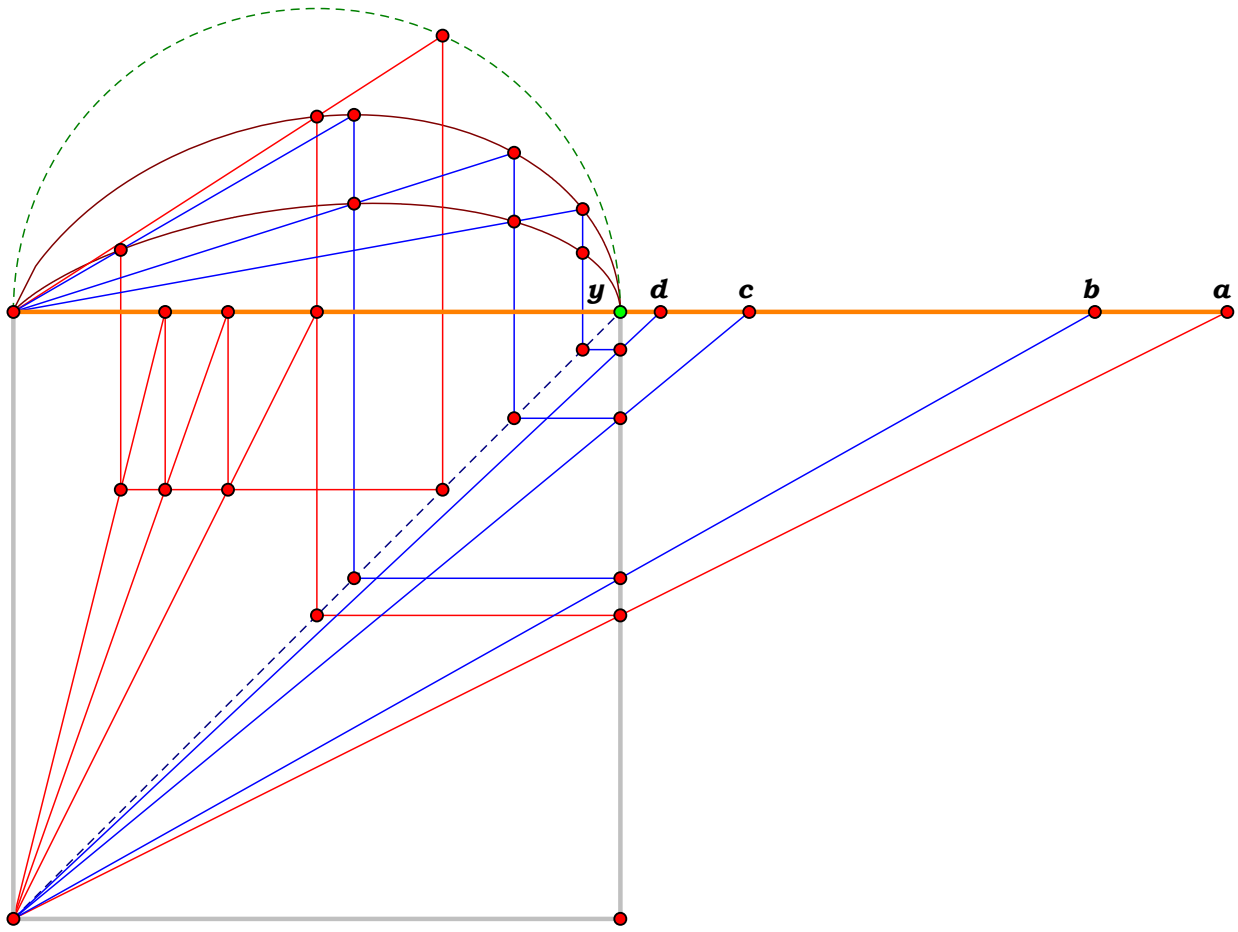
$b = 1.12246$

$c = 1.01944$

$a^{\frac{1}{6}} - b = 0.00000$

$a^{\frac{1}{36}} - c = 0.00000$

Fifth Curve



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.78180$

$c = 1.21233$

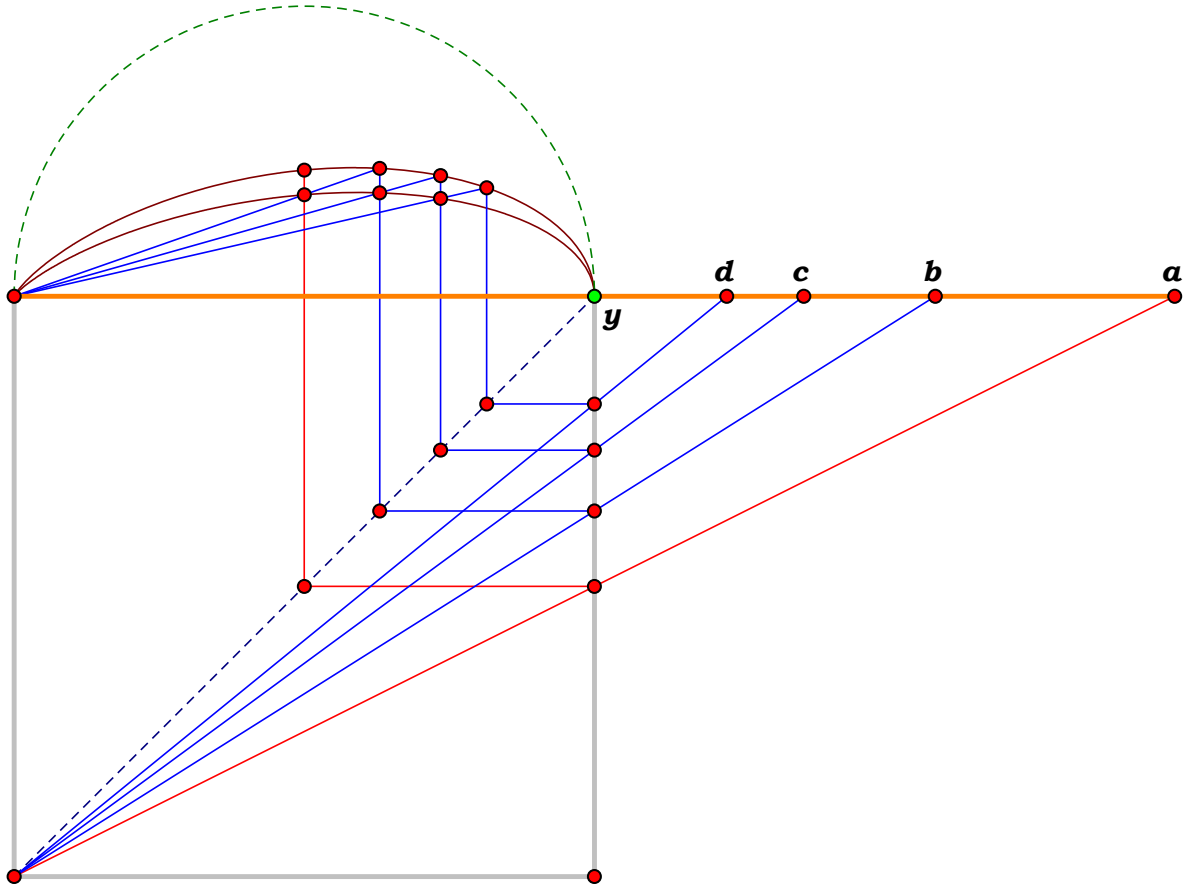
$d = 1.06628$

$a^{\frac{30}{36}} - b = 0.00000$

$a^{\frac{60}{216}} - c = 0.00000$

$a^{\frac{120}{1296}} - d = 0.00000$

One over five



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.58740$

$c = 1.36079$

$d = 1.22799$

$a^{\frac{4}{6}} - b = 0.00000$

$a^{\frac{16}{36}} - c = 0.00000$

$a^{\frac{64}{216}} - d = 0.00000$

Third over fifth.

$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.78180$

$c = 1.58740$

$d = 1.41421$

$e = 1.25992$

$f = 1.12246$

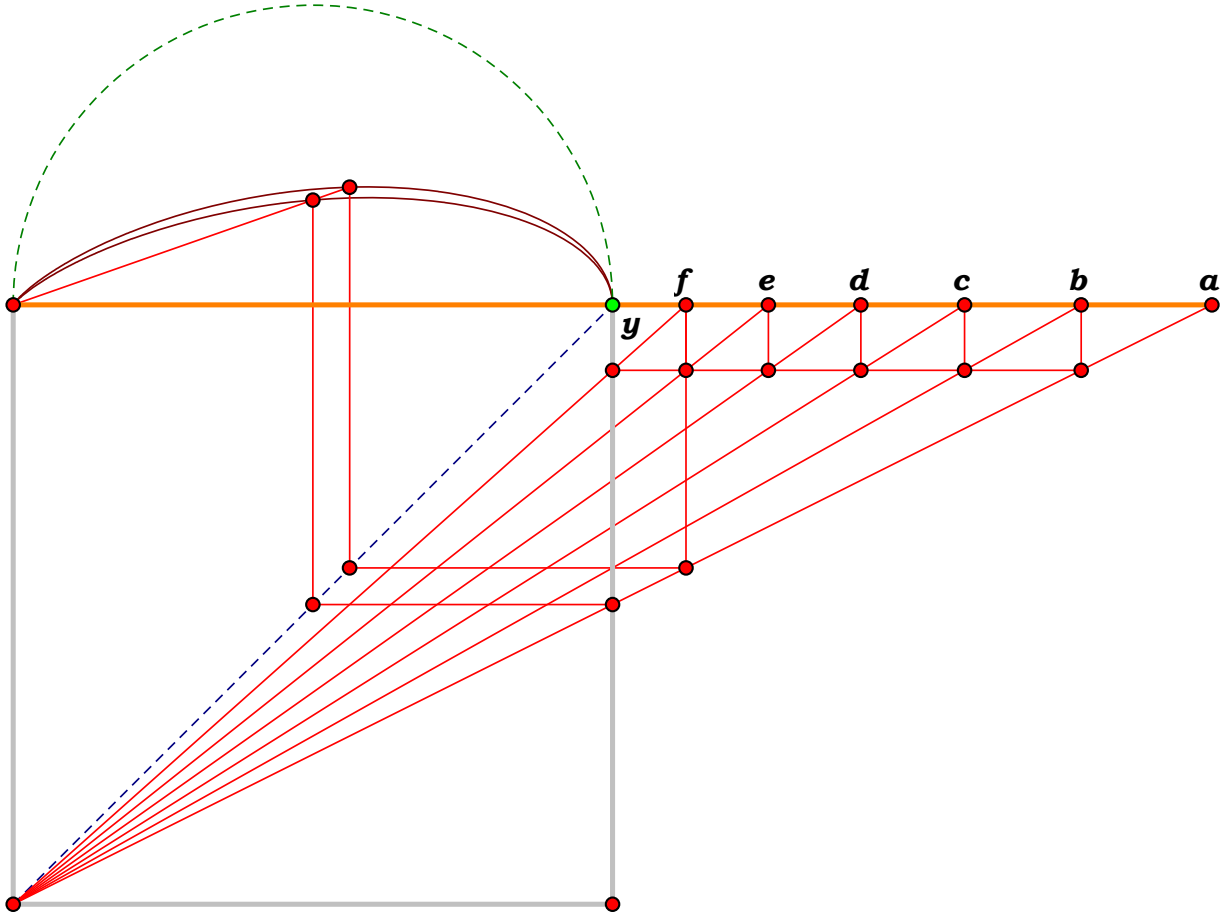
$a^{\frac{5}{6}} - b = 0.00000$

$a^{\frac{4}{6}} - c = 0.00000$

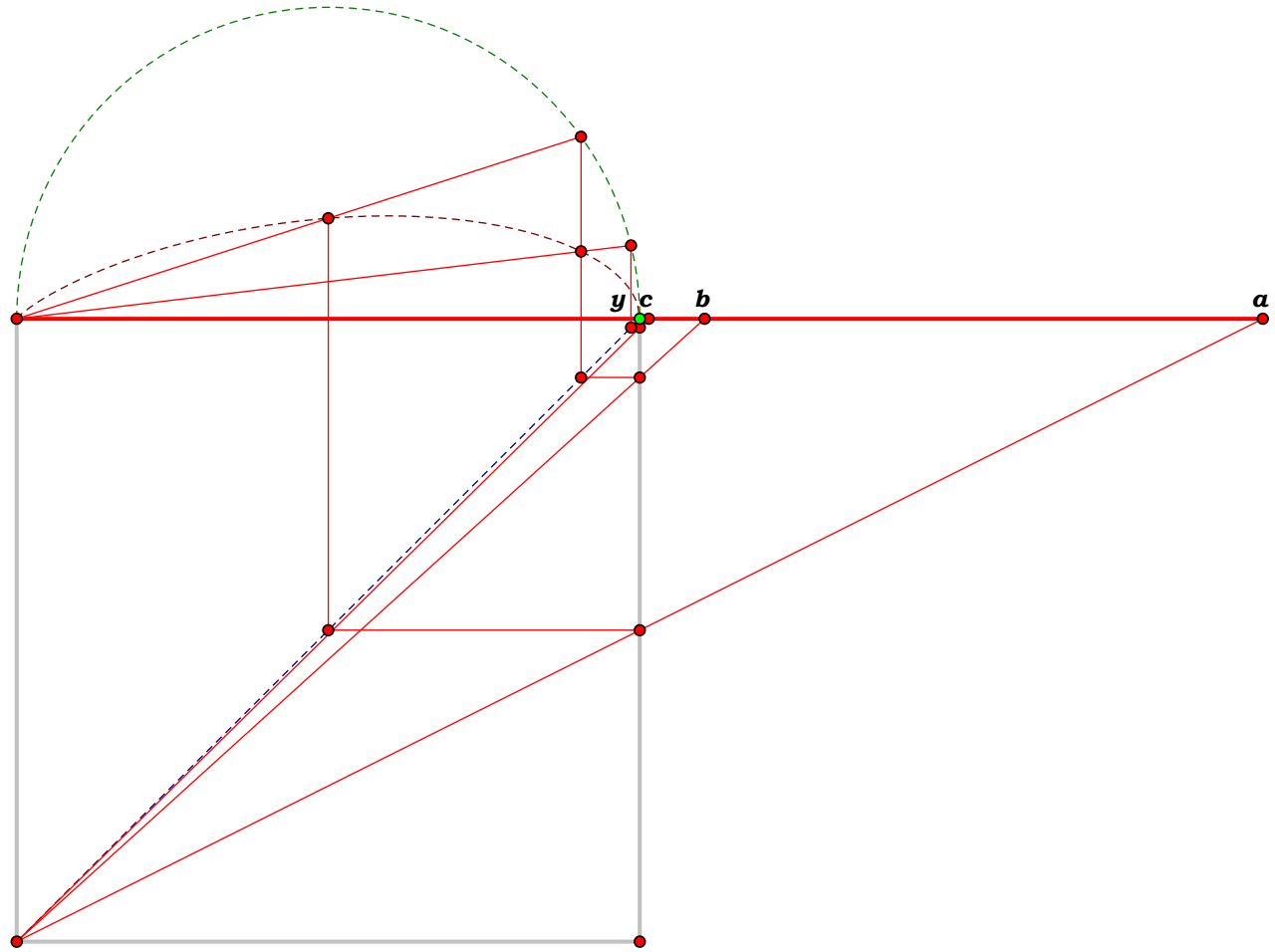
$a^{\frac{3}{6}} - d = 0.00000$

$a^{\frac{2}{6}} - e = 0.00000$

$a^{\frac{1}{6}} - f = 0.00000$



Four over five



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

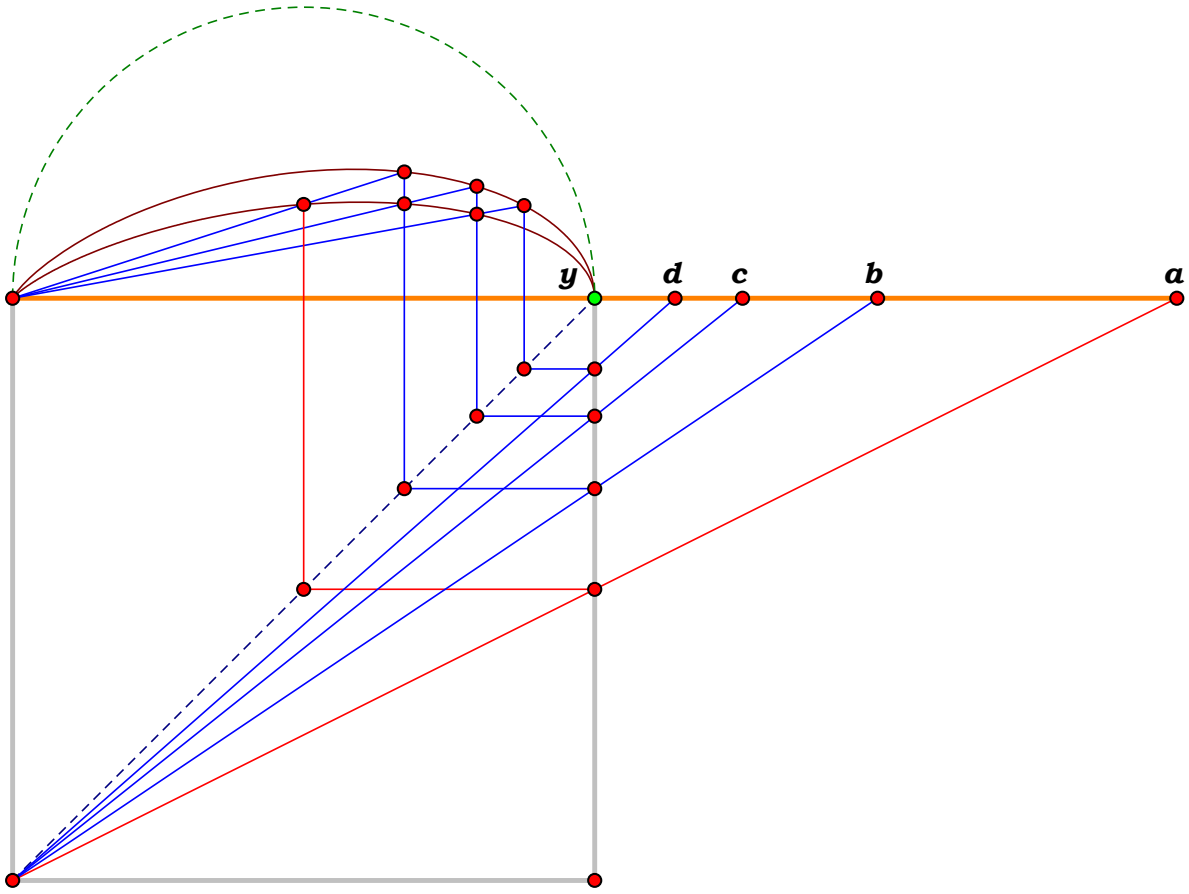
$a = 2.00000$

$b = 1.10409$

$c = 1.01425$

$a^{\frac{1}{7}} - b = 0.00000$

$a^{\frac{1}{49}} - c = 0.00000$



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.48599$

$c = 1.25399$

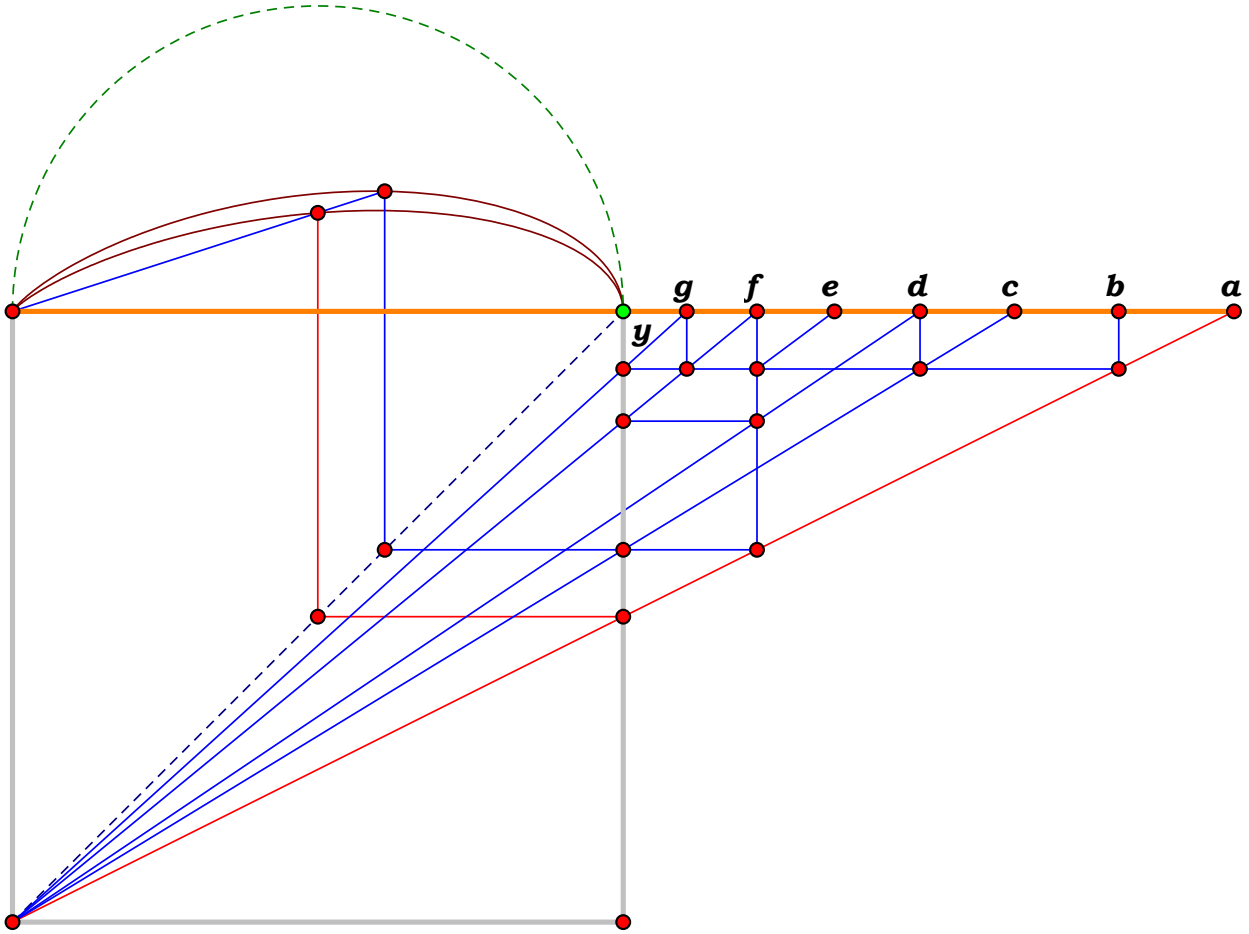
$d = 1.13807$

$a^{\frac{4}{7}} - b = 0.00000$

$a^{\frac{16}{49}} - c = 0.00000$

$a^{\frac{64}{343}} - d = 0.00000$

Three over six



$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.81145$

$c = 1.64067$

$d = 1.48599$

$e = 1.34590$

$f = 1.21901$

$g = 1.10409$

$a^{\frac{6}{7}} - b = 0.00000$

$a^{\frac{5}{7}} - c = 0.00000$

$a^{\frac{4}{7}} - d = 0.00000$

$a^{\frac{3}{7}} - e = 0.00000$

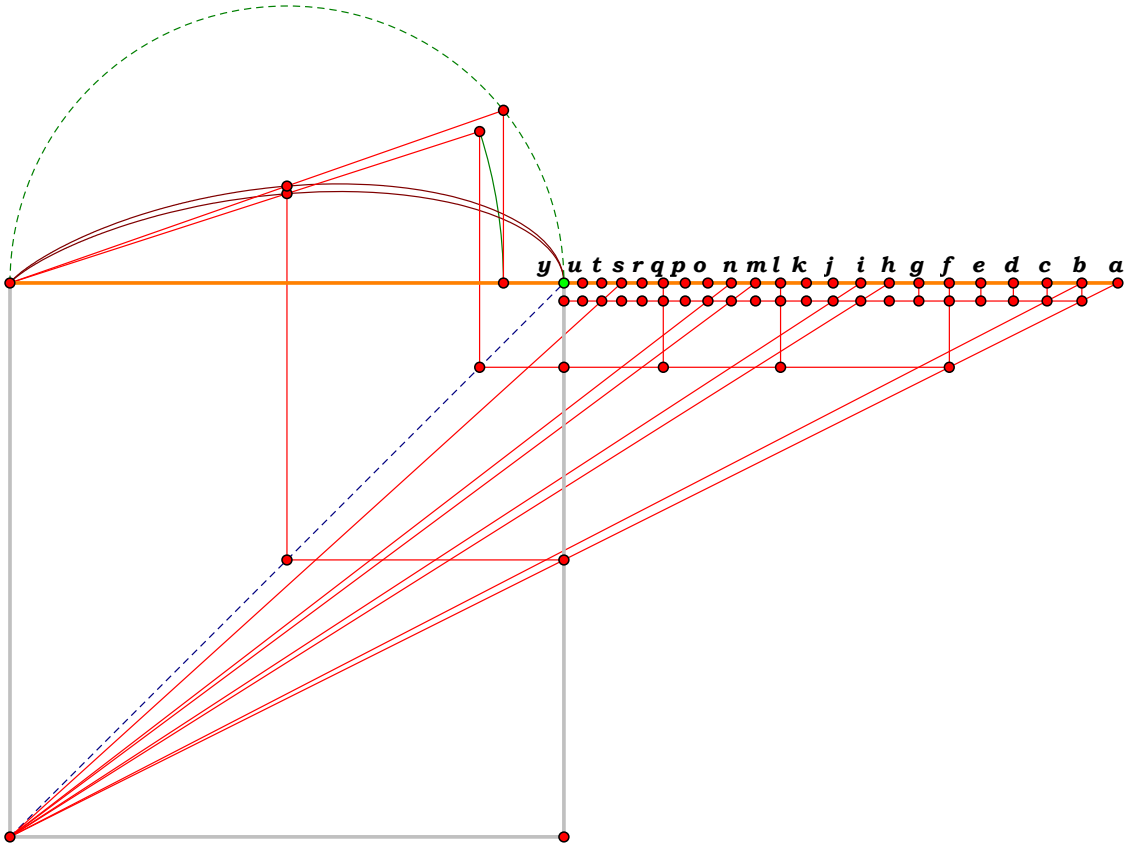
$a^{\frac{2}{7}} - f = 0.00000$

$a^{\frac{1}{7}} - g = 0.00000$

Four over six

Unit = 1.00000
x = 0.00000
y = 1.00000
a = 2.00000
b = 1.93506
c = 1.87224
d = 1.81145
e = 1.75263
f = 1.69573
g = 1.64067
h = 1.58740
i = 1.53586
j = 1.48599
k = 1.43775
l = 1.39107
m = 1.34590
n = 1.30220
o = 1.25992
p = 1.21901
q = 1.17943
r = 1.14114
s = 1.10409
t = 1.06824
u = 1.03356

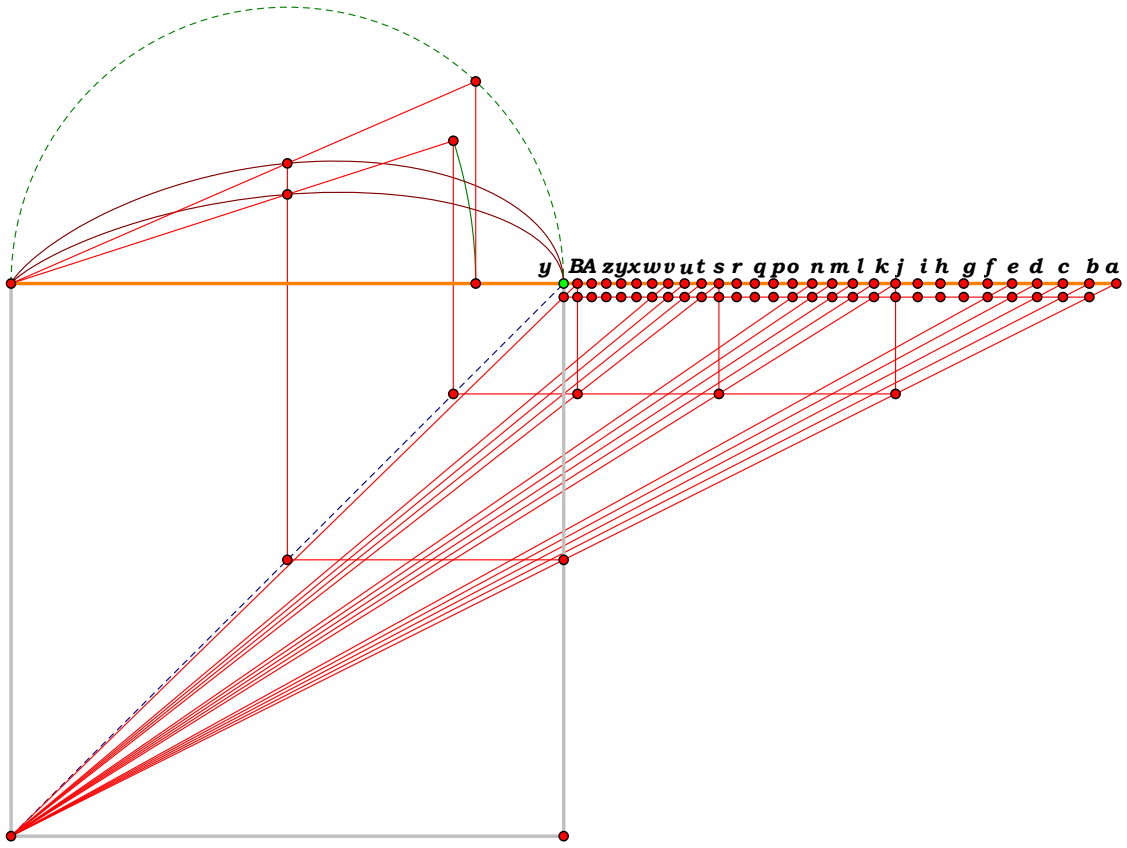
$a^{\frac{20}{21}} - b = 0.00000$
$a^{\frac{19}{21}} - c = 0.00000$
$a^{\frac{18}{21}} - d = 0.00000$
$a^{\frac{17}{21}} - e = 0.00000$
$a^{\frac{16}{21}} - f = 0.00000$
$a^{\frac{15}{21}} - g = 0.00000$
$a^{\frac{14}{21}} - h = 0.00000$
$a^{\frac{13}{21}} - i = 0.00000$
$a^{\frac{12}{21}} - j = 0.00000$
$a^{\frac{11}{21}} - k = 0.00000$
$a^{\frac{10}{21}} - l = 0.00000$
$a^{\frac{9}{21}} - m = 0.00000$
$a^{\frac{8}{21}} - n = 0.00000$
$a^{\frac{7}{21}} - o = 0.00000$
$a^{\frac{6}{21}} - p = 0.00000$
$a^{\frac{5}{21}} - q = 0.00000$
$a^{\frac{4}{21}} - r = 0.00000$
$a^{\frac{3}{21}} - s = 0.00000$
$a^{\frac{2}{21}} - t = 0.00000$
$a^{\frac{1}{21}} - u = 0.00000$



Five over six

Unit = 1.00000
x = 0.00000
y = 1.00000
a = 2.00000
b = 1.95110
c = 1.90339
d = 1.85685
e = 1.81145
f = 1.76715
g = 1.72395
h = 1.68179
i = 1.64067
j = 1.60055
k = 1.56142
l = 1.52324
m = 1.48599
n = 1.44966
o = 1.41421
p = 1.37963
q = 1.34590
r = 1.31299
s = 1.28089
t = 1.24957
u = 1.21901
v = 1.18921
w = 1.16013
x = 1.13176
y = 1.10409
z = 1.07709
A = 1.05076
B = 1.02506

$a^{\frac{27}{28}} - b = 0.00000$
$a^{\frac{26}{28}} - c = 0.00000$
$a^{\frac{25}{28}} - d = 0.00000$
$a^{\frac{24}{28}} - e = 0.00000$
$a^{\frac{23}{28}} - f = 0.00000$
$a^{\frac{22}{28}} - g = 0.00000$
$a^{\frac{21}{28}} - h = 0.00000$
$a^{\frac{20}{28}} - i = 0.00000$
$a^{\frac{19}{28}} - j = 0.00000$
$a^{\frac{18}{28}} - k = 0.00000$
$a^{\frac{17}{28}} - l = 0.00000$
$a^{\frac{16}{28}} - m = 0.00000$
$a^{\frac{15}{28}} - n = 0.00000$
$a^{\frac{14}{28}} - o = 0.00000$
$a^{\frac{13}{28}} - p = 0.00000$
$a^{\frac{12}{28}} - q = 0.00000$
$a^{\frac{11}{28}} - r = 0.00000$
$a^{\frac{10}{28}} - s = 0.00000$
$a^{\frac{9}{28}} - t = 0.00000$
$a^{\frac{8}{28}} - u = 0.00000$
$a^{\frac{7}{28}} - v = 0.00000$
$a^{\frac{6}{28}} - w = 0.00000$
$a^{\frac{5}{28}} - x = 0.00000$
$a^{\frac{4}{28}} - y = 0.00000$



Three over six

$a^{\frac{3}{28}} - z = 0.00000$
$a^{\frac{2}{28}} - A = 0.00000$
$a^{\frac{1}{28}} - B = 0.00000$

$Unit = 1.00000$

$x = 0.00000$

$y = 1.00000$

$a = 2.00000$

$b = 1.81145$

$c = 1.64067$

$d = 1.48599$

$e = 1.34590$

$f = 1.21901$

$g = 1.10409$

$a^{\frac{6}{7}} - b = 0.00000$

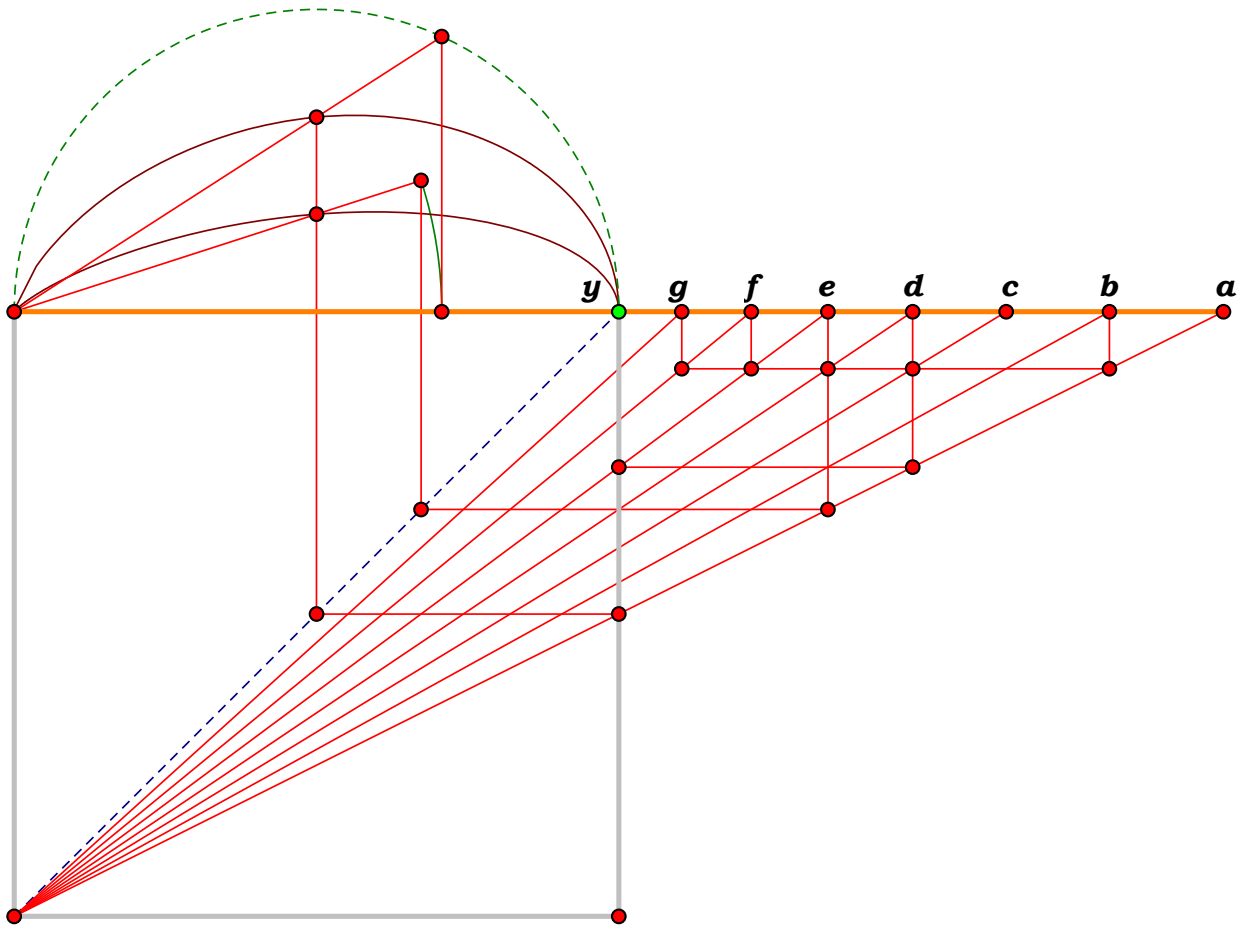
$a^{\frac{5}{7}} - c = 0.00000$

$a^{\frac{4}{7}} - d = 0.00000$

$a^{\frac{3}{7}} - e = 0.00000$

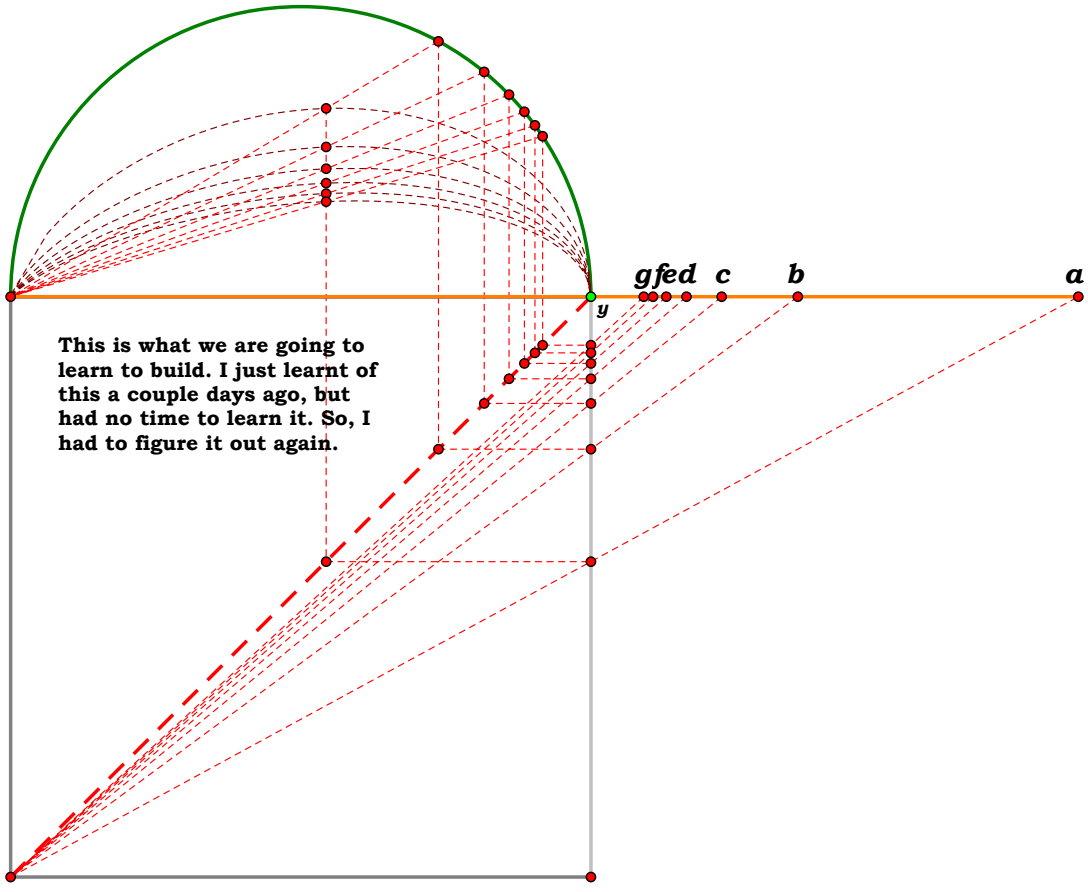
$a^{\frac{2}{7}} - f = 0.00000$

$a^{\frac{1}{7}} - g = 0.00000$

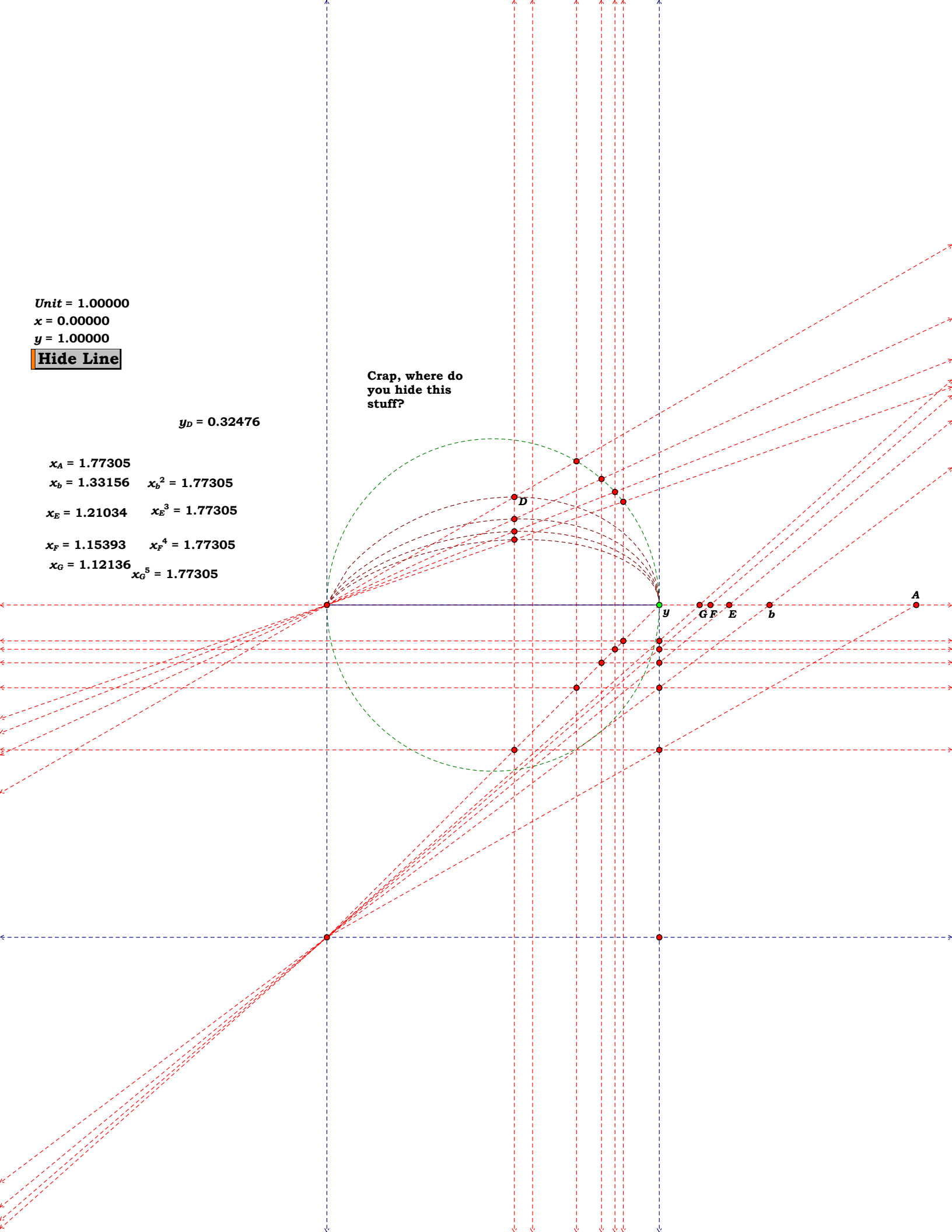


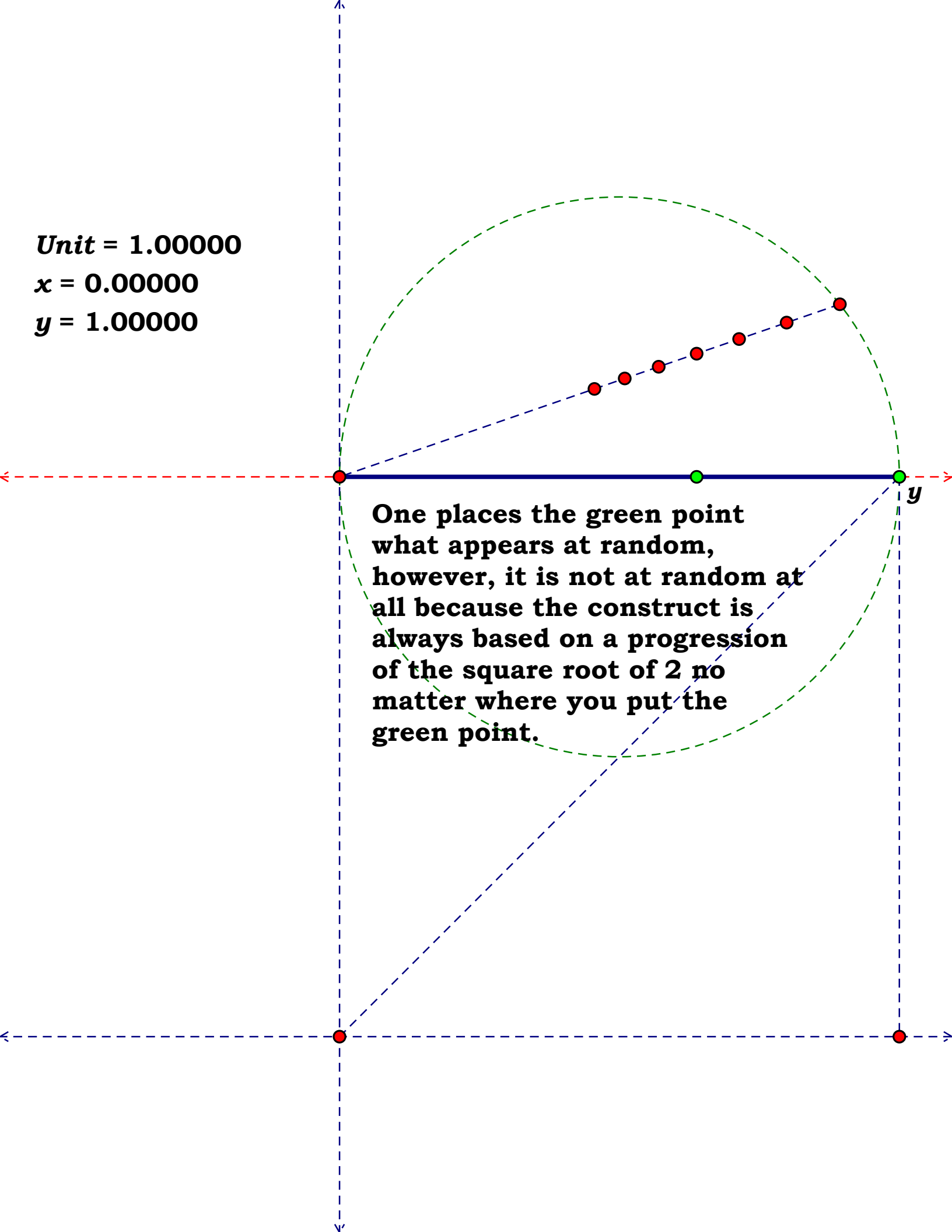
One over six

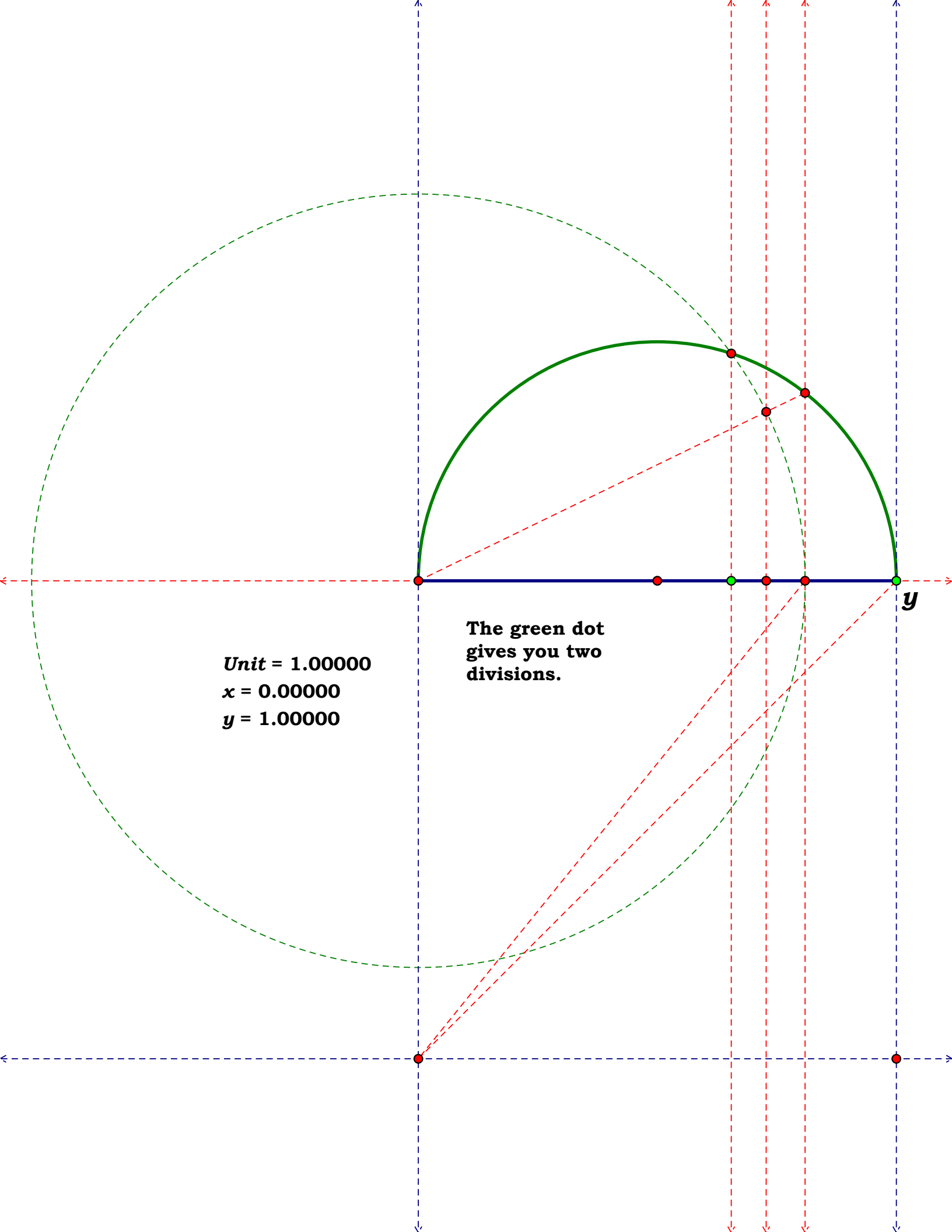
Basic Exponential Series

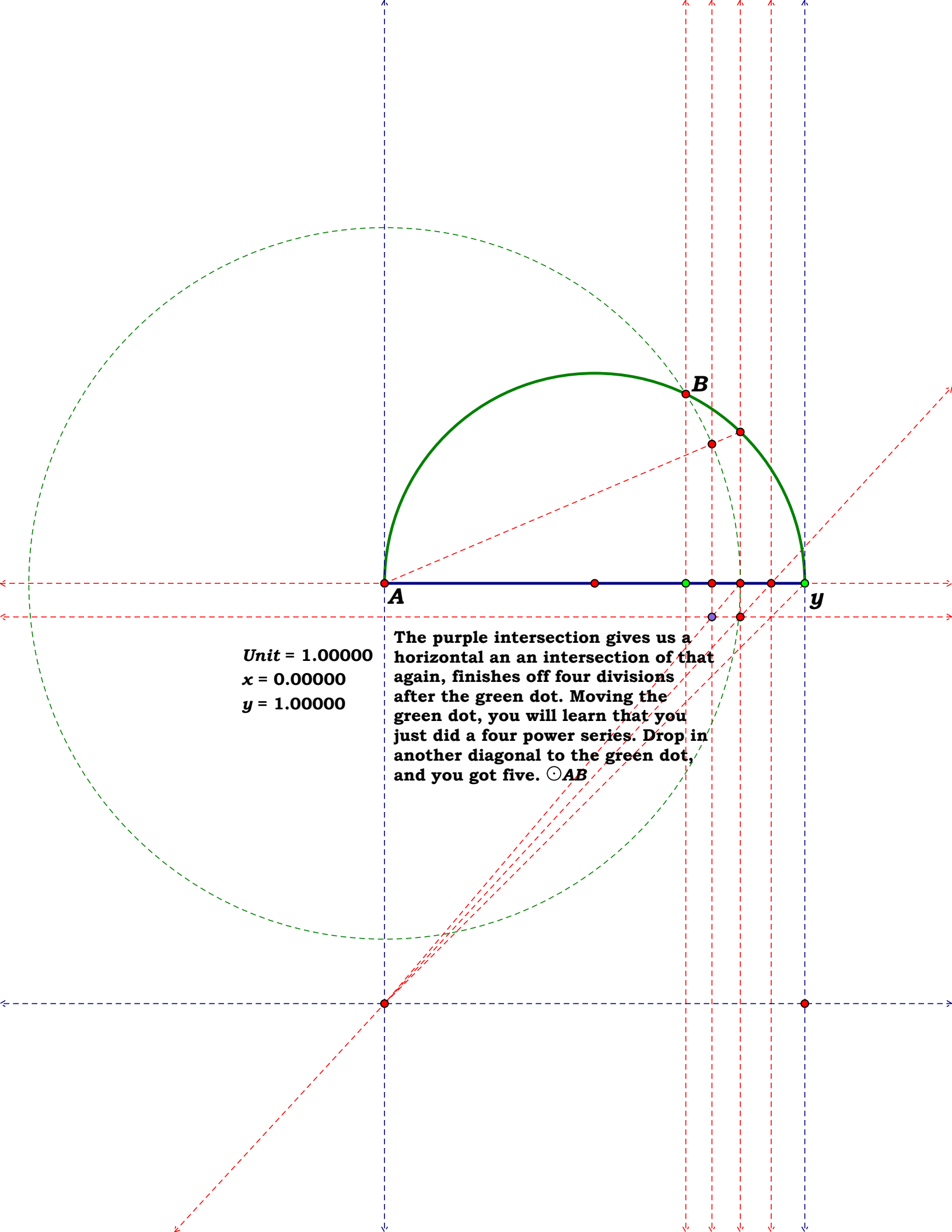


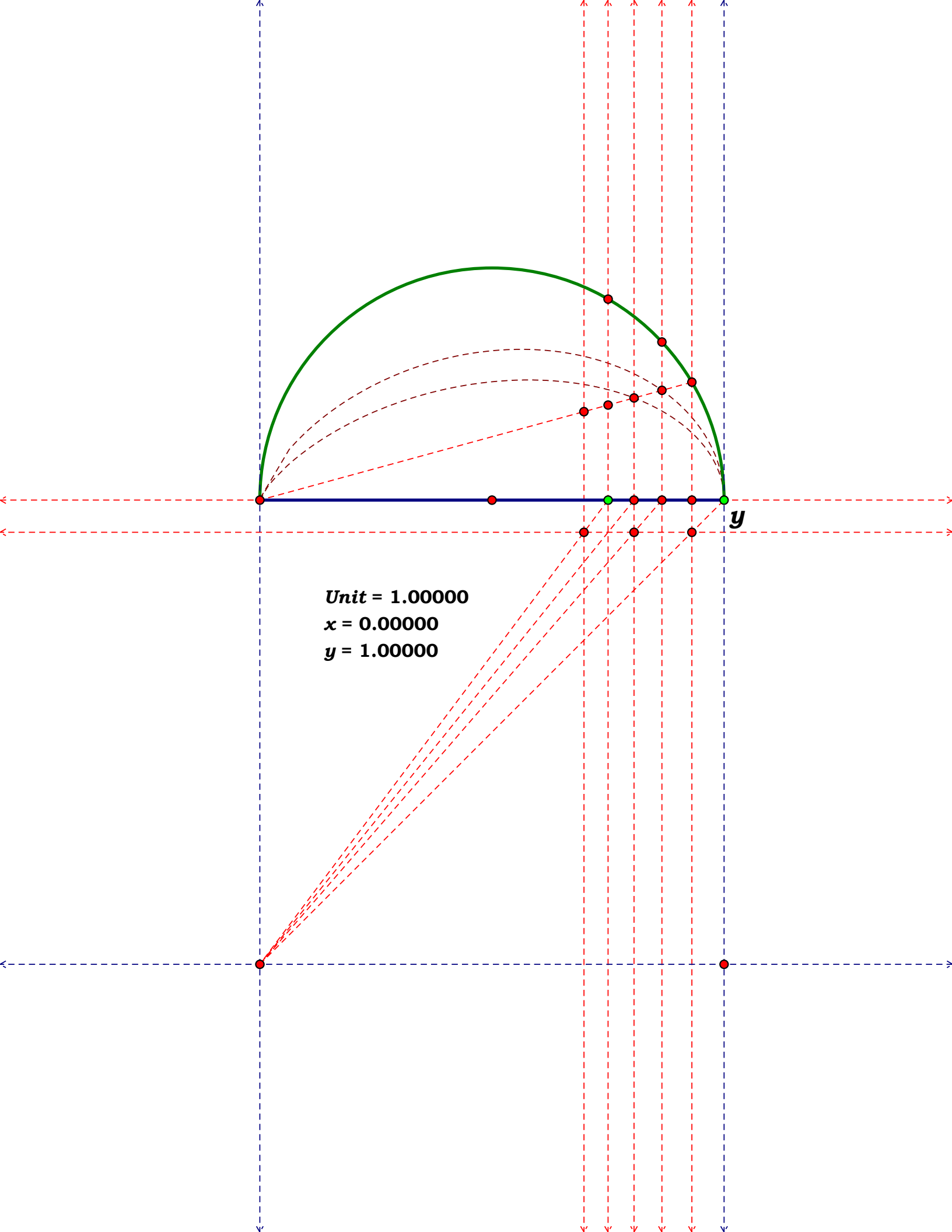
Unit = 1.00000
x = 0.00000
y = 1.00000
a = 1.83975
b = 1.35638 $b^2 - a$ = 0.00000
c = 1.22533 $c^3 - a$ = 0.00000
d = 1.16464 $d^4 - a$ = 0.00000
e = 1.12967 $e^5 - a$ = 0.00000
f = 1.10695 $f^6 - a$ = 0.00000
g = 1.09100 $g^7 - a$ = 0.00000

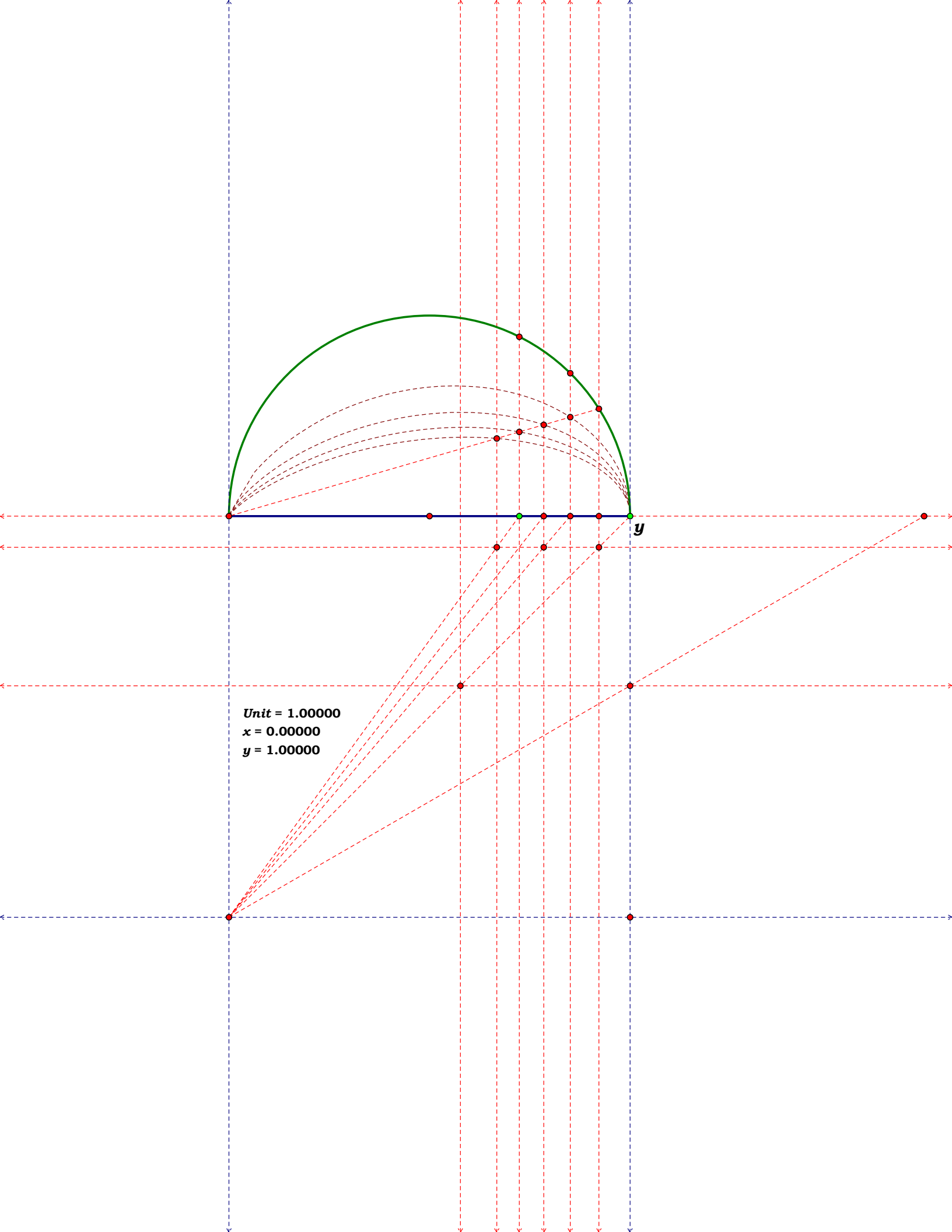

Unit = 1.00000
x = 0.00000
y = 1.00000
Hide Line
Crap, where do you hide this stuff?
y_D = 0.32476
x_A = 1.77305
x_b = 1.33156
x_b^2 = 1.77305
x_E = 1.21034
x_E^3 = 1.77305
x_F = 1.15393
x_F^4 = 1.77305
x_G = 1.12136
x_G^5 = 1.77305
D
y
G
F
E
b
A


Unit = 1.00000
x = 0.00000
y = 1.00000
y
One places the green point what appears at random, however, it is not at random at all because the construct is always based on a progression of the square root of 2 no matter where you put the green point.

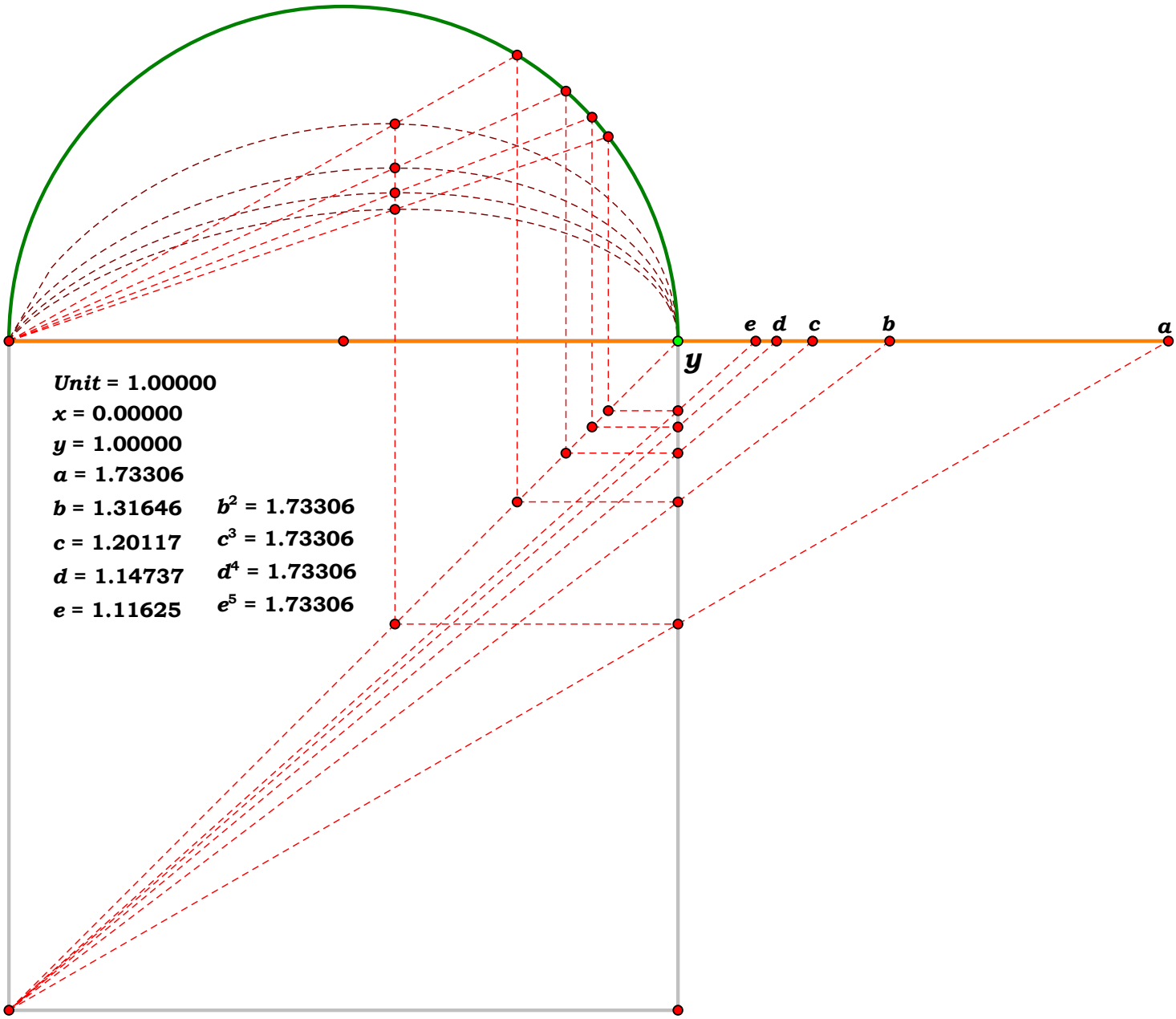

y
The green dot gives you two divisions.
Unit = 1.00000
x = 0.00000
y = 1.00000


B
A
y
Unit = 1.00000
x = 0.00000
y = 1.00000
The purple intersection gives us a horizontal an an intersection of that again, finishes off four divisions after the green dot. Moving the green dot, you will learn that you just did a four power series. Drop in another diagonal to the green dot, and you got five. ⊙AB


y
Unit = 1.00000
x = 0.00000
y = 1.00000


y
Unit = 1.00000
x = 0.00000
y = 1.00000

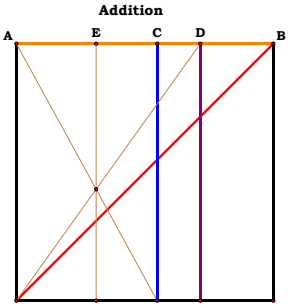
All done.


e
d
c
b
a
y
Unit = 1.00000
x = 0.00000
y = 1.00000
a = 1.73306
b = 1.31646
c = 1.20117
d = 1.14737
e = 1.11625
b^2 = 1.73306
c^3 = 1.73306
d^4 = 1.73306
e^5 = 1.73306

Operations

Friday, August 11, 2023

Some people can look at a figure and learn from it, i.e., they can learn math upon things with simply the correct figure to start their studies. One can call these



$A = 0.00000$
$B = 1.00000$
$C = 0.54787$
$D = 0.71597$
$E = 0.31037$

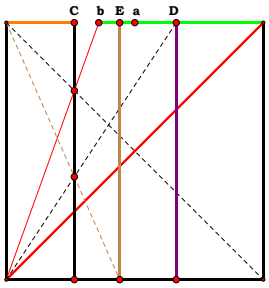
$\frac{C \cdot D}{C + D} - E = 0.00000$

$\frac{1}{C} = 1.82525$

$\frac{1}{D} = 1.39671$

$\frac{1}{E} = 3.22196$

$\left(\frac{1}{C} + \frac{1}{D}\right) - \frac{1}{E} = 0.00000$



Subtraction

$C = 0.26460$
$D = 0.66125$
$E = 0.44110$

$\frac{1}{C} = 3.77934$

$\frac{1}{D} = 1.51228$

$\frac{1}{E} = 2.26706$

$a = 0.50000$
$b = 0.35980$

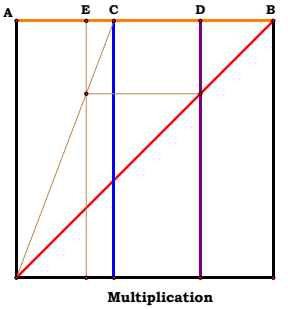
$\frac{1}{a} = 2.00000$

$\frac{1}{b} = 2.77934$

$\frac{1}{C} - \frac{1}{b} = 1.00000$

$\frac{1}{C} - \frac{1}{D} = 2.26706$

$\left(\frac{1}{C} - \frac{1}{D}\right) - \frac{1}{E} = 0.00000$



Multiplication

$A = 0.00000$
$B = 1.00000$
$C = 0.37977$
$D = 0.71597$
$E = 0.27191$

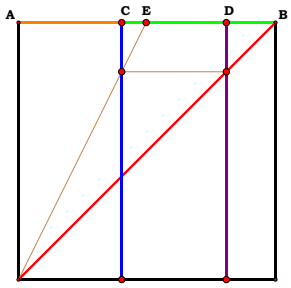
$(C \cdot D) - E = 0.00000$

$\frac{1}{C} = 2.63315$

$\frac{1}{D} = 1.39671$

$\frac{1}{E} = 3.67775$

$\left(\frac{1}{C} \cdot \frac{1}{D}\right) - \frac{1}{E} = 0.00000$



Division

$C = 0.40156$
$D = 0.80865$
$E = 0.49659$

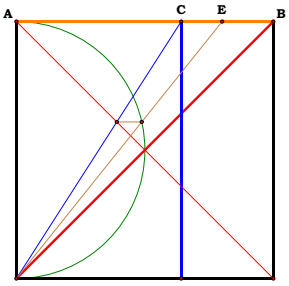
$\frac{C}{D} - E = 0.00000$

$\frac{1}{C} = 2.49026$

$\frac{1}{D} = 1.23663$

$\frac{1}{E} = 2.01375$

$\frac{\frac{1}{C}}{\frac{1}{D}} - \frac{1}{E} = 0.00000$



Root

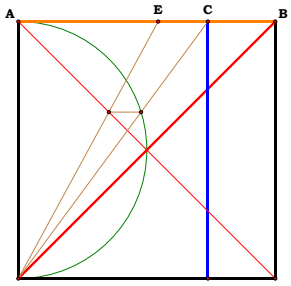
$A = 0.00000$
$B = 1.00000$
$C = 0.64126$
$E = 0.80079$

$\sqrt{C} - E = 0.00000$

$\frac{1}{C} = 1.55944$

$\frac{1}{E} = 1.24877$

$\frac{1}{\sqrt{C}} - \frac{1}{E} = 0.00000$



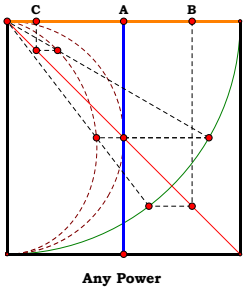
Square

$A = 0.00000$
$B = 1.00000$
$C = 0.73776$
$E = 0.54429$

$C^2 - E = 0.00000$

$\frac{1}{C^2} = 1.83727$

$\frac{1}{E} = 1.83727$



Any Power

$A = 0.50000$
$B = 0.79370$
$C = 0.12500$

$\frac{1}{A} = 2.00000$

$\frac{1}{B} = 1.25992$

$\frac{1}{C} = 8.00000$

$A^3 - C = 0.00000$

$\left(\frac{1}{A}\right)^3 - \frac{1}{C} = 0.00000$

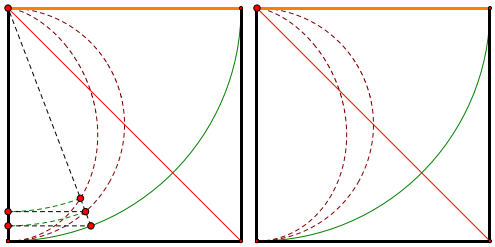
$A^{\frac{1}{3}} - B = 0.00000$

$\left(\frac{1}{A}\right)^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

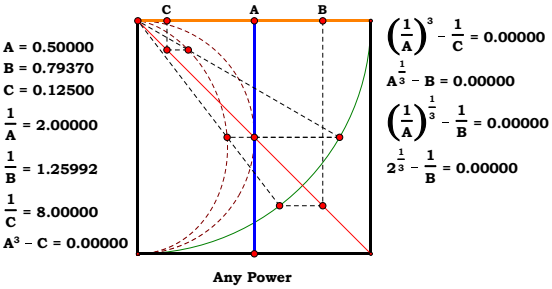
$2^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

Any Power

First construct the Loci



to one's desired power



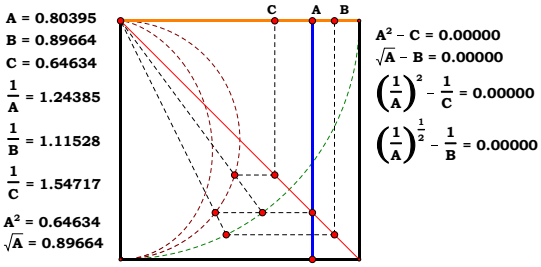
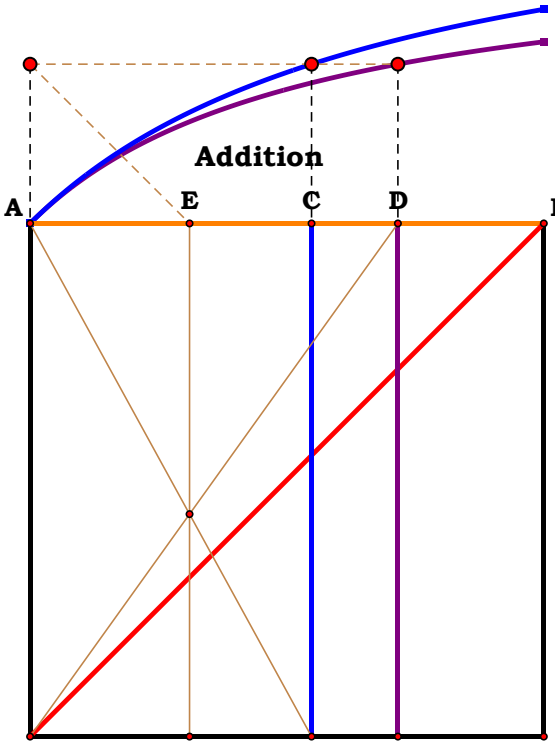


Figure Loci

One can easily draw the loci of any equation.



A = 0.00000
B = 1.00000
C = 0.54787
D = 0.71597
E = 0.31037

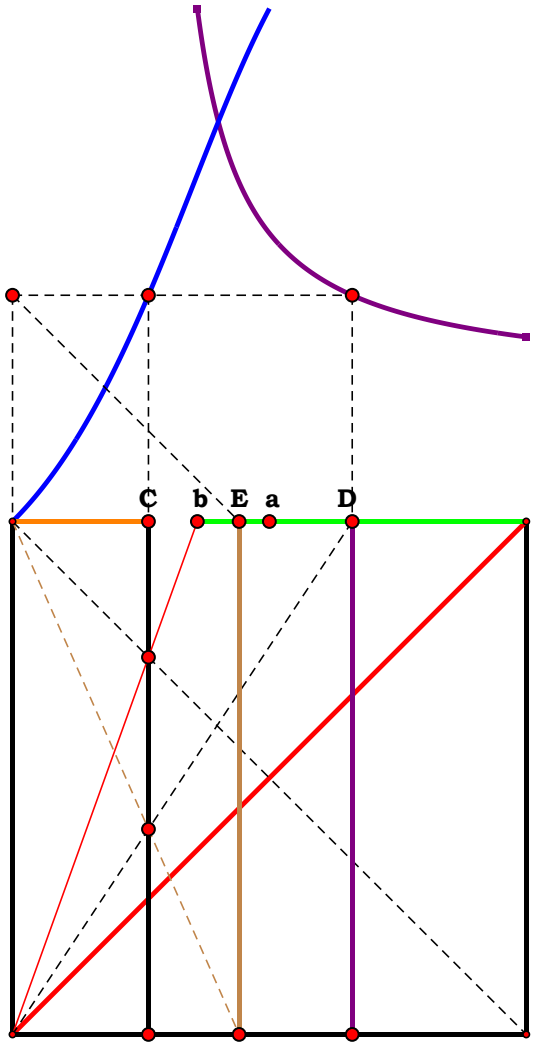
$$\frac{C \cdot D}{C + D} - E = 0.00000$$

$$\frac{1}{C} = 1.82525$$

$$\frac{1}{D} = 1.39671$$

$$\frac{1}{E} = 3.22196$$

$$\left(\frac{1}{C} + \frac{1}{D}\right) - \frac{1}{E} = 0.00000$$



$C = 0.26460$

$D = 0.66125$

$E = 0.44110$

$\frac{1}{C} = 3.77934$

$\frac{1}{D} = 1.51228$

$\frac{1}{E} = 2.26706$

$a = 0.50000$

$b = 0.35980$

$\frac{1}{a} = 2.00000$

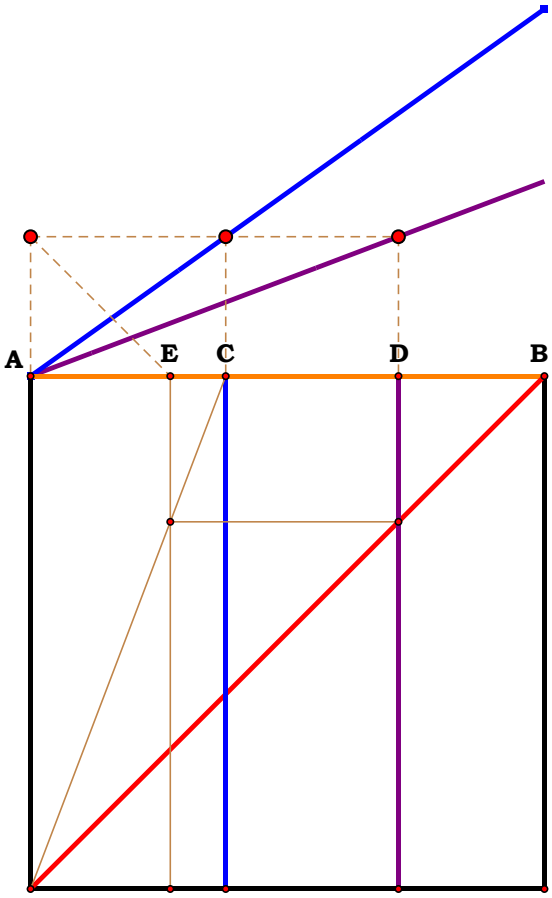
$\frac{1}{b} = 2.77934$

$\frac{1}{C} - \frac{1}{b} = 1.00000$

$\frac{1}{C} - \frac{1}{D} = 2.26706$

$\left(\frac{1}{C} - \frac{1}{D}\right) - \frac{1}{E} = 0.00000$

Subtraction



$A = 0.00000$

$B = 1.00000$

$C = 0.37977$

$D = 0.71597$

$E = 0.27191$

$(C \cdot D) - E = 0.00000$

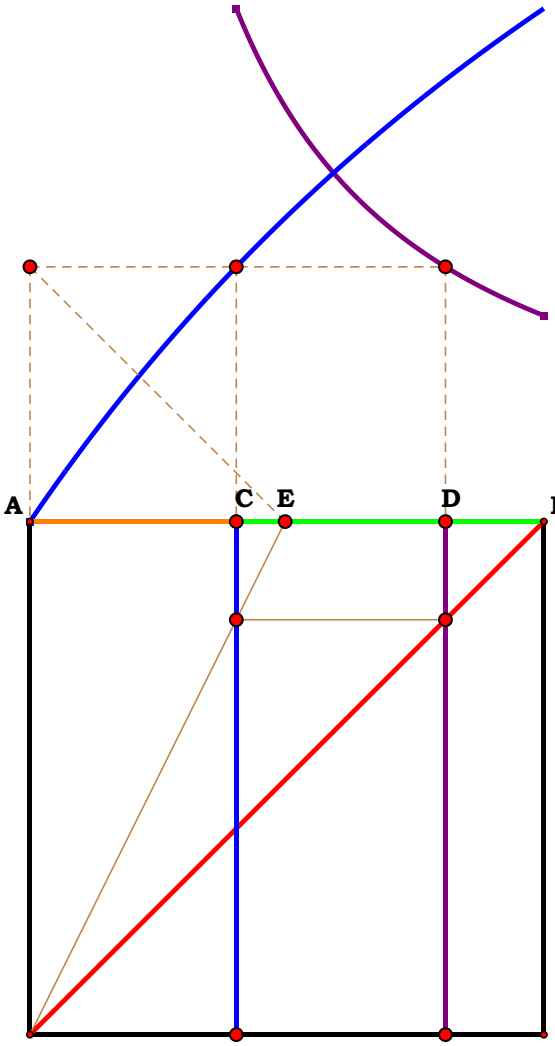
$\frac{1}{C} = 2.63315$

$\frac{1}{D} = 1.39671$

$\frac{1}{E} = 3.67775$

$\left(\frac{1}{C} \cdot \frac{1}{D}\right) - \frac{1}{E} = 0.00000$

Multiplication



$C = 0.40156$

$D = 0.80865$

$E = 0.49659$

$\frac{C}{D} - E = 0.00000$

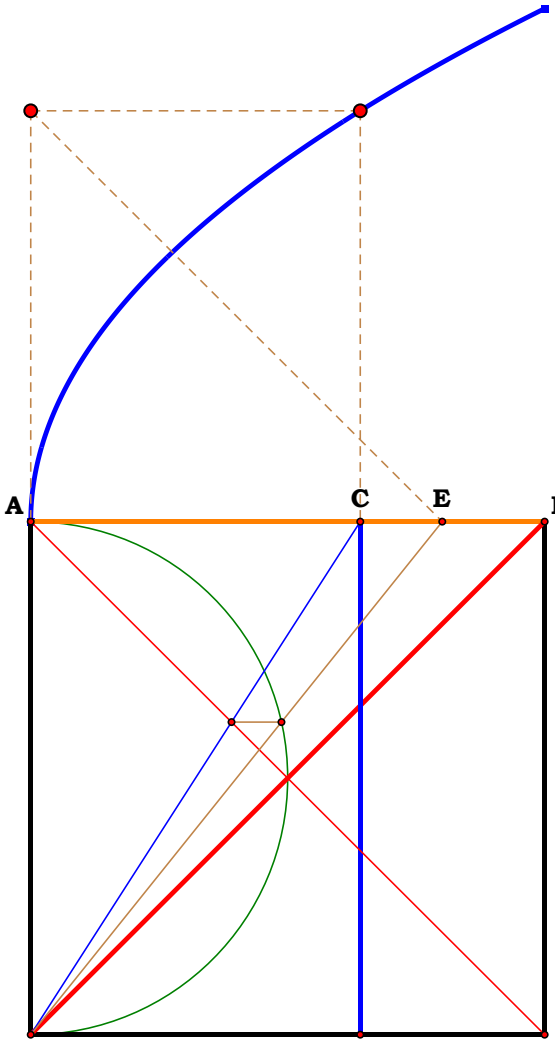
$\frac{1}{C} = 2.49026$

$\frac{1}{D} = 1.23663$

$\frac{1}{E} = 2.01375$

$\frac{\frac{1}{C}}{\frac{1}{D}} - \frac{1}{E} = 0.00000$

Division



$A = 0.00000$

$B = 1.00000$

$C = 0.64126$

$E = 0.80079$

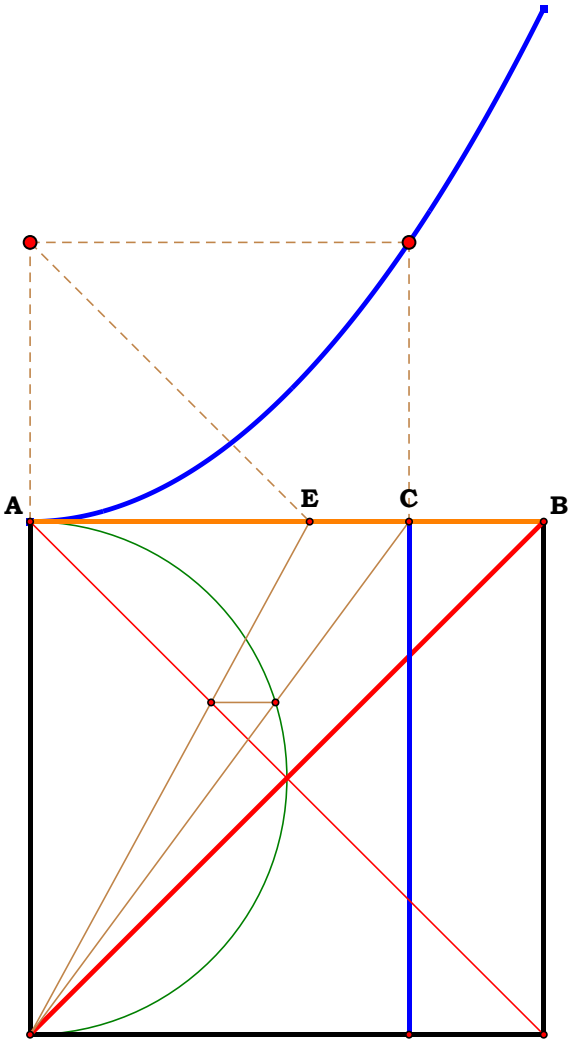
$\sqrt{C} - E = 0.00000$

$\frac{1}{C} = 1.55944$

$\frac{1}{E} = 1.24877$

$\frac{1}{\sqrt{C}} - \frac{1}{E} = 0.00000$

Root



A = 0.00000

B = 1.00000

C = 0.73776

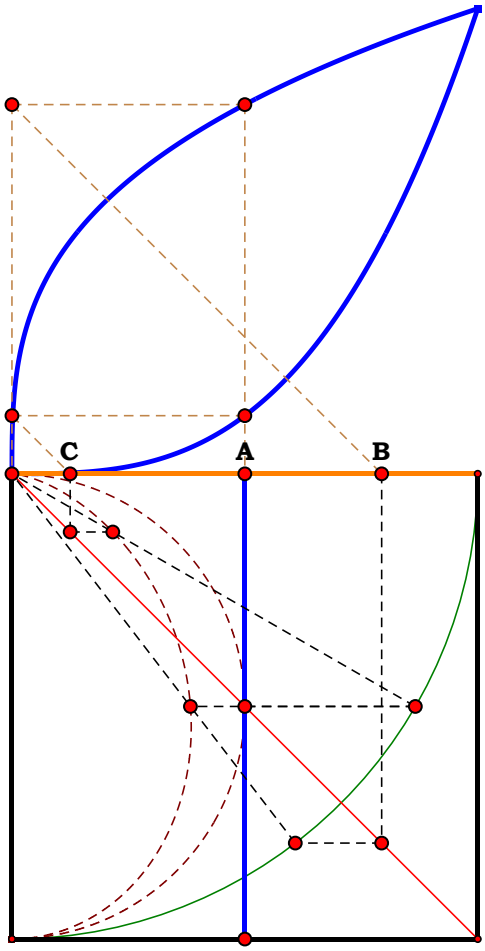
E = 0.54429

$C^2 - E = 0.00000$

$\frac{1}{C^2} = 1.83727$

$\frac{1}{E} = 1.83727$

Square



$A = 0.50000$

$B = 0.79370$

$C = 0.12500$

$\frac{1}{A} = 2.00000$

$\frac{1}{B} = 1.25992$

$\frac{1}{C} = 8.00000$

$A^3 - C = 0.00000$

$\left(\frac{1}{A}\right)^3 - \frac{1}{C} = 0.00000$

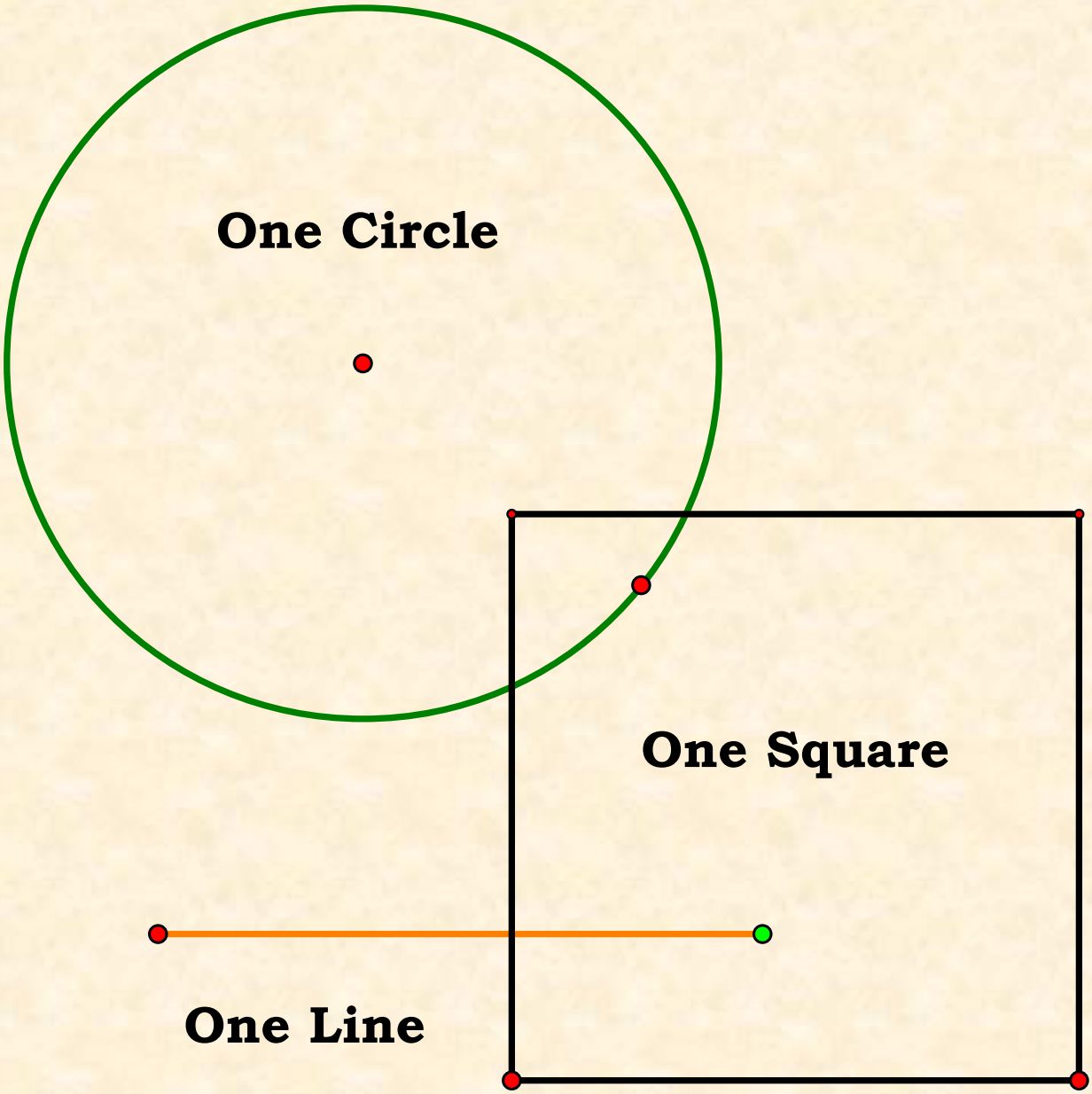
$A^{\frac{1}{3}} - B = 0.00000$

$\left(\frac{1}{A}\right)^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

$2^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

Any Power

Box's Laws



By John Clark

$Unit = 1.00000$

$A = 1.45491$

$B = 1.00000$

$C = -0.31267$

$D = -1.00000$

$D - C = -0.68733$

$B + C = 0.68733$

$$\frac{B}{D - C} = -1.45491$$

$$\frac{B}{B + C} = 1.45491$$

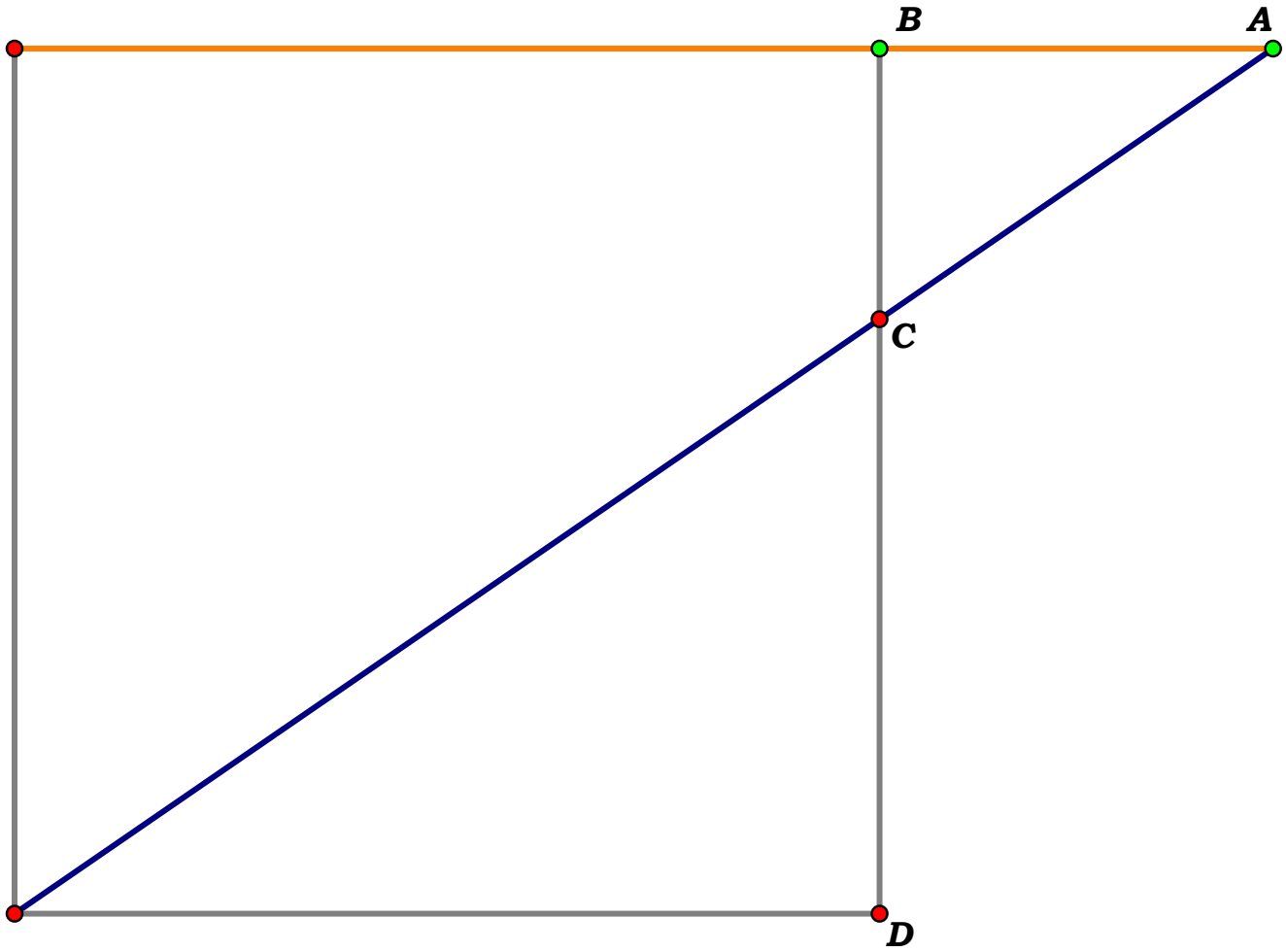
$$\frac{A}{\frac{B}{D - C}} = -1.00000$$

$$\frac{A}{\frac{B}{B + C}} = 1.00000$$

$$\frac{A}{B} = 1.45491$$

$$\frac{D}{D - C} = 1.45491$$

$$\frac{A}{B} - \frac{D}{D - C} = 0.00000$$



$Unit = 1.00000$

$A = -1.04260$

$B = 1.00000$

$C = -1.95914$

$D = -1.00000$

$D - C = 0.95914$

$B + C = -0.95914$

$$\frac{B}{D - C} = 1.04260$$

$$\frac{B}{B + C} = -1.04260$$

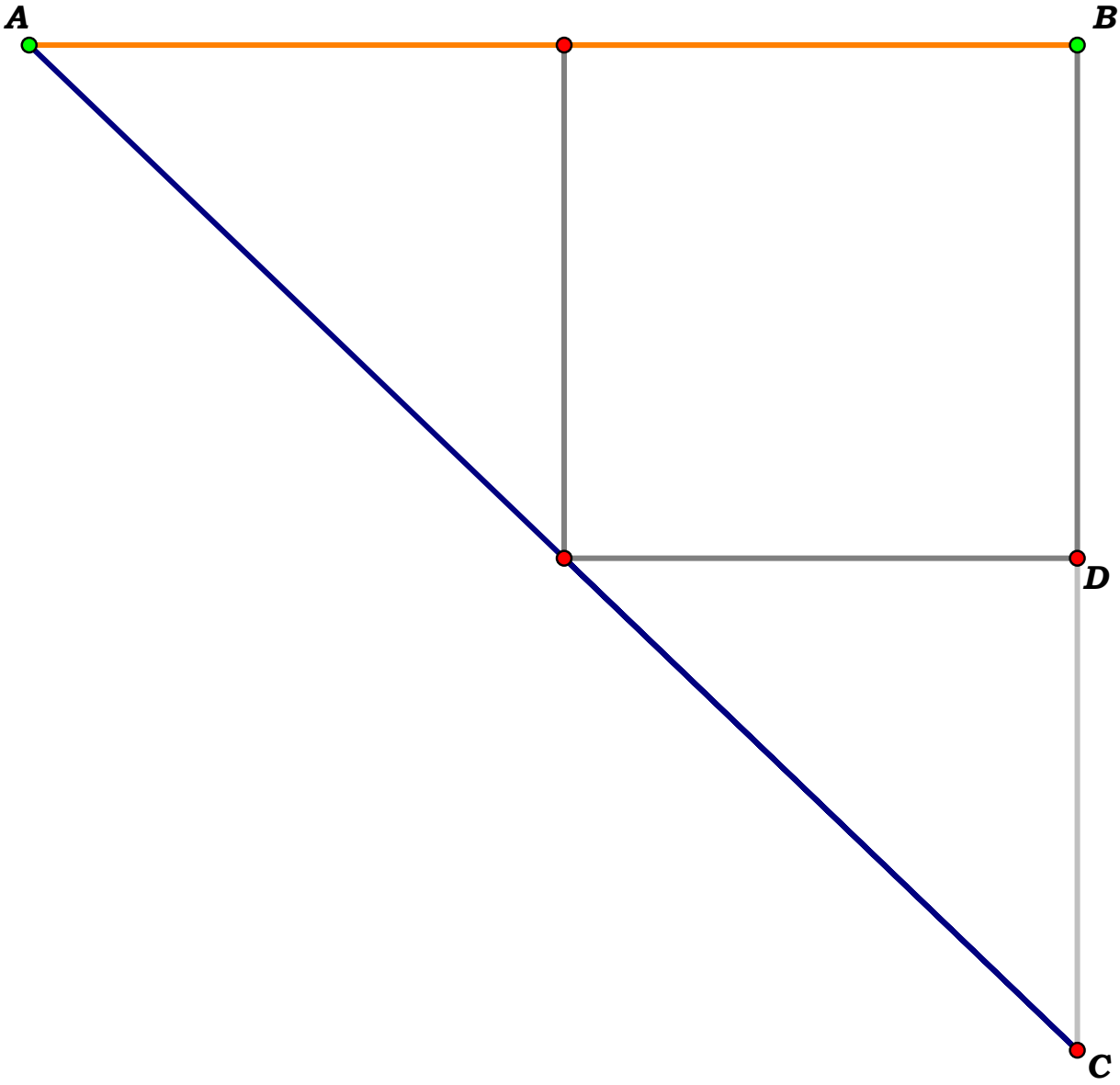
$$\frac{A}{\frac{B}{D - C}} = -1.00000$$

$$\frac{A}{\frac{B}{B + C}} = 1.00000$$

$$\frac{A}{B} = -1.04260$$

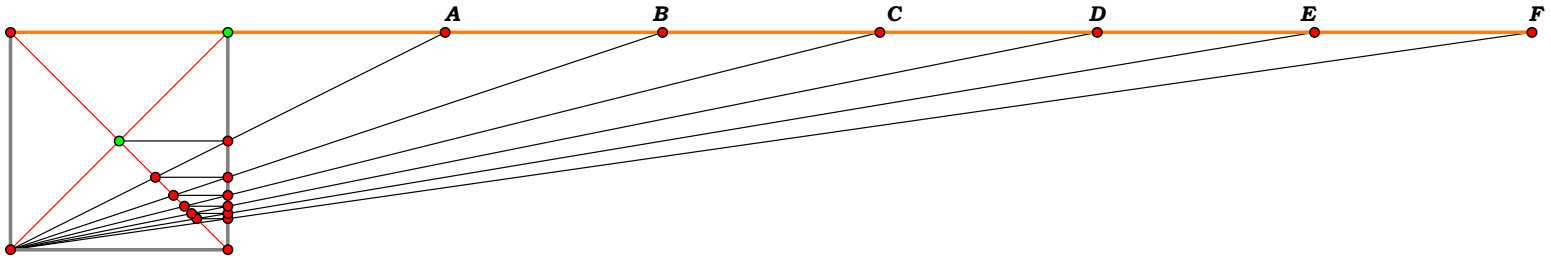
$$\frac{D}{D - C} = -1.04260$$

$$\frac{A}{B} - \frac{D}{D - C} = 0.00000$$



Unit **= 1.00000**

A **= 2.00000**
B **= 3.00000**
C **= 4.00000**
D **= 5.00000**
E **= 6.00000**
F **= 7.00000**



$Unit = 1.00000$

$A = 1.00000$

$B = 0.50000$

$C = 0.33333$

$D = 0.25000$

$E = 0.20000$

$F = 0.16667$

$G = 0.14286$

$H = 0.12500$

$$\frac{A}{A} = 1.00000$$

$$\frac{A}{B} = 2.00000$$

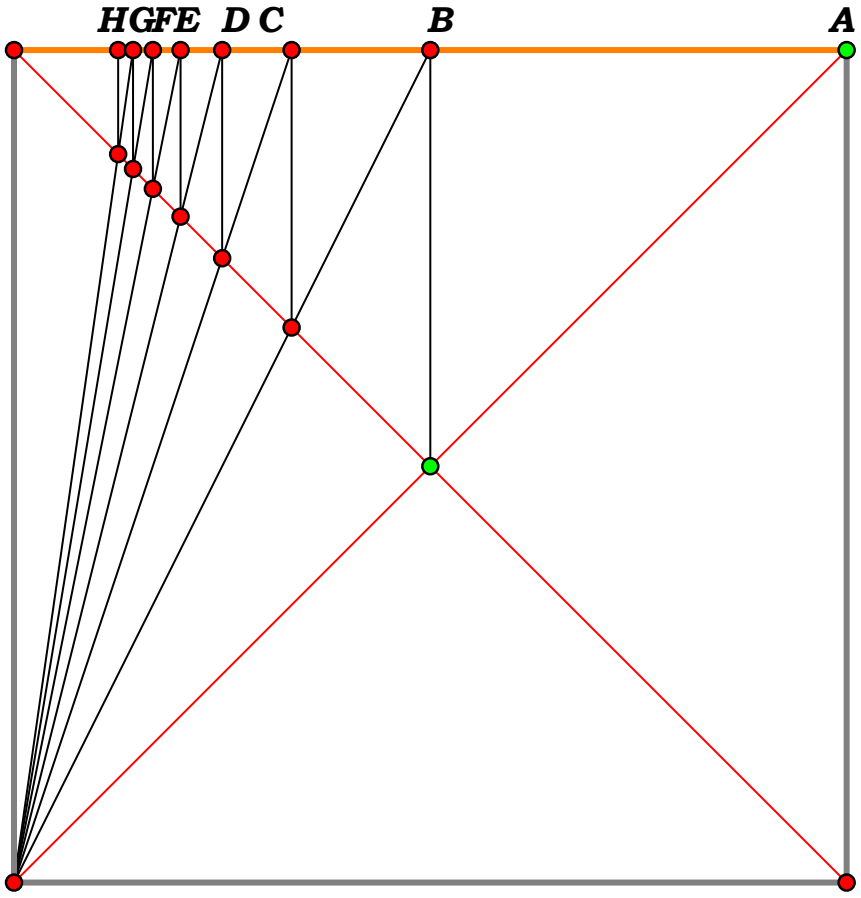
$$\frac{A}{C} = 3.00000$$

$$\frac{A}{D} = 4.00000$$

$$\frac{A}{E} = 5.00000$$

$$\frac{A}{F} = 6.00000$$

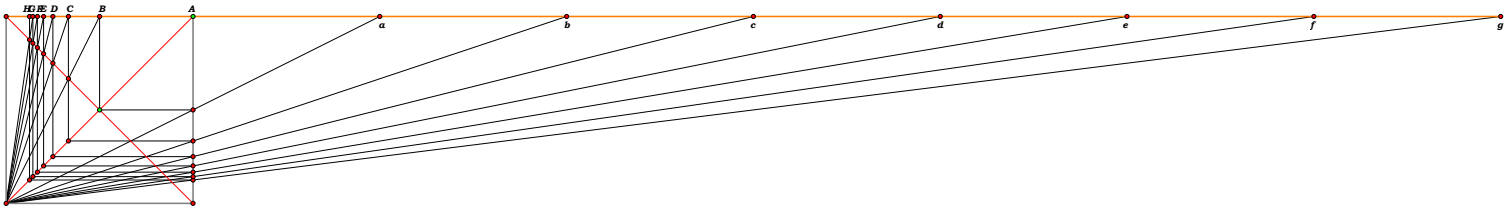
$$\frac{A}{G} = 7.00000$$



$A = 1.00000$
$B = 0.50000$
$C = 0.33333$
$D = 0.25000$
$E = 0.20000$
$F = 0.16667$
$G = 0.14286$
$H = 0.12500$

$\frac{A}{A} = 1.00000$
$\frac{A}{B} = 2.00000$
$\frac{A}{C} = 3.00000$
$\frac{A}{D} = 4.00000$
$\frac{A}{E} = 5.00000$
$\frac{A}{F} = 6.00000$
$\frac{A}{G} = 7.00000$

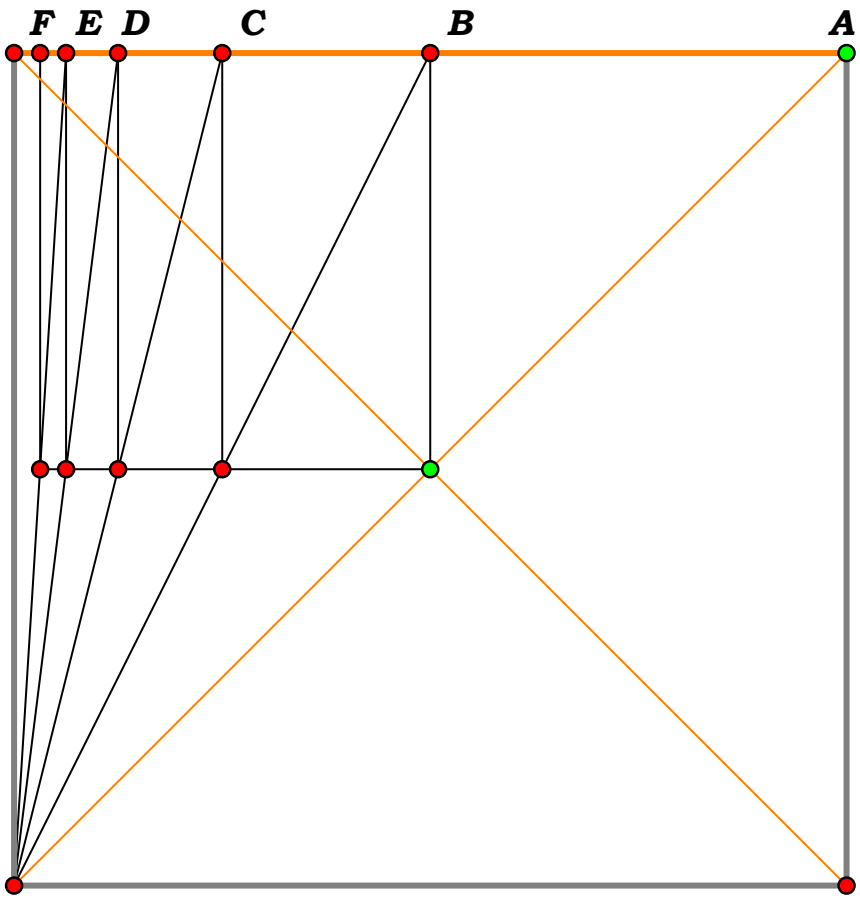
$a = 2.00000$
$b = 3.00000$
$c = 4.00000$
$d = 5.00000$
$e = 6.00000$
$f = 7.00000$
$g = 8.00000$



$A = 1.00000$
$B = 0.50000$
$C = 0.25000$
$D = 0.12500$
$E = 0.06250$
$F = 0.03125$

$\frac{A}{B} = 2.00000$
$\frac{A}{C} = 4.00000$
$\frac{A}{D} = 8.00000$
$\frac{A}{E} = 16.00000$
$\frac{A}{F} = 32.00000$

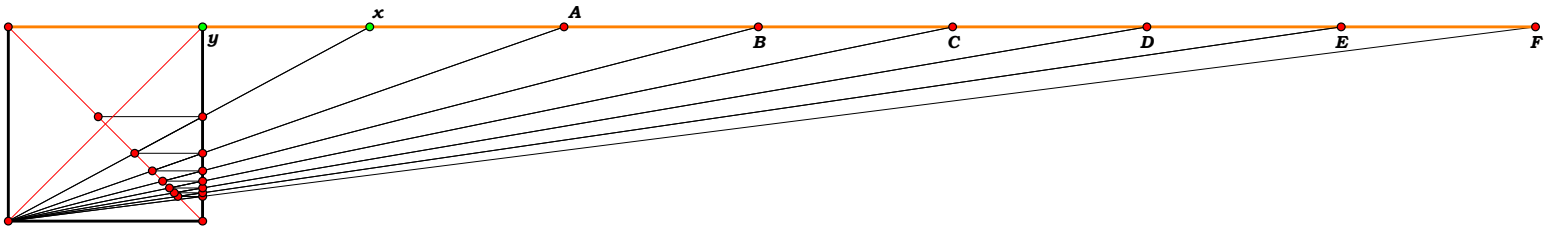
$\frac{A}{C} - \frac{A^2}{B} = 0.00000$
$\frac{A}{D} - \frac{A^3}{B} = 0.00000$
$\frac{A}{E} - \frac{A^4}{B} = 0.00000$
$\frac{A}{F} - \frac{A^5}{B} = 0.00000$

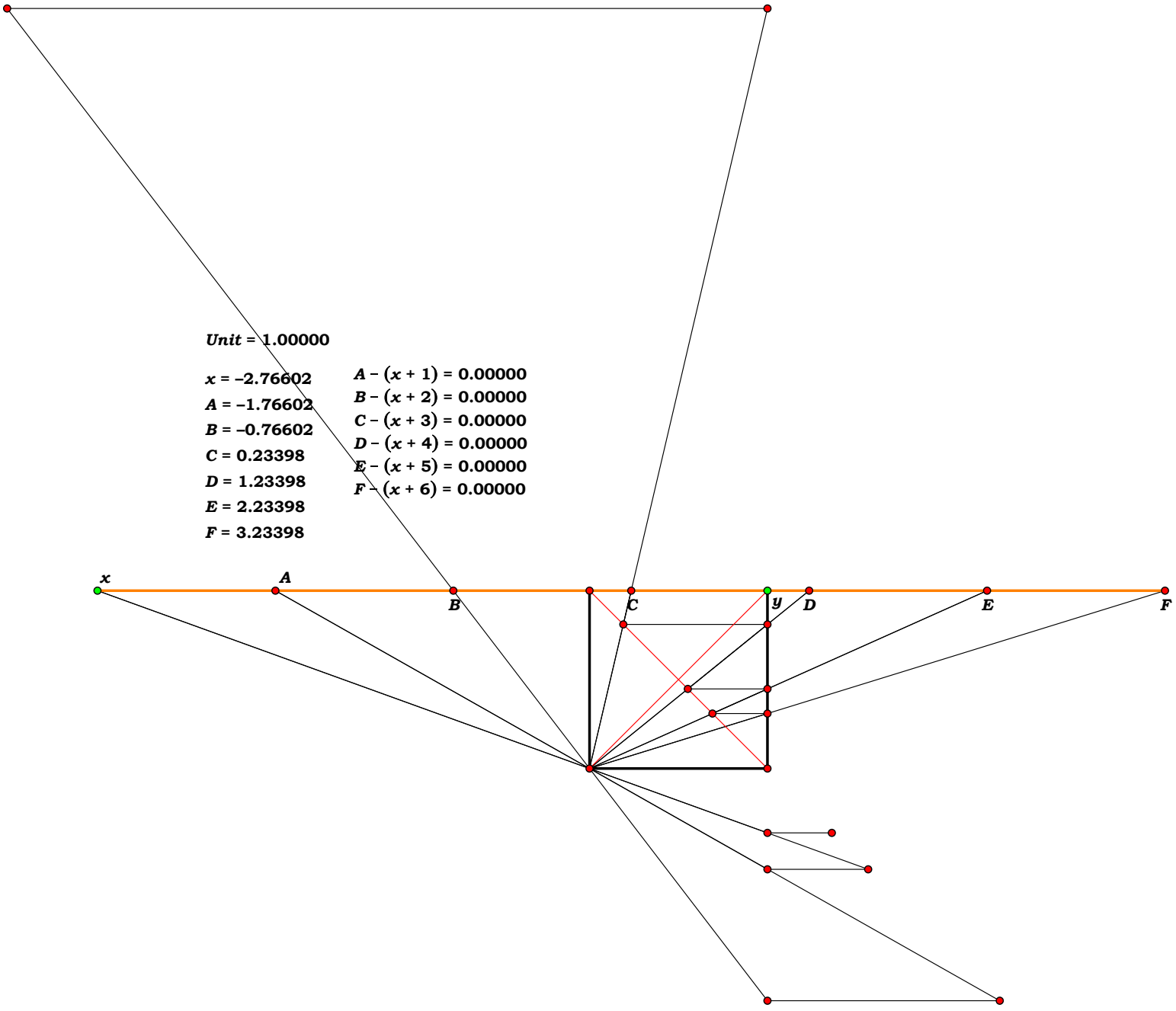


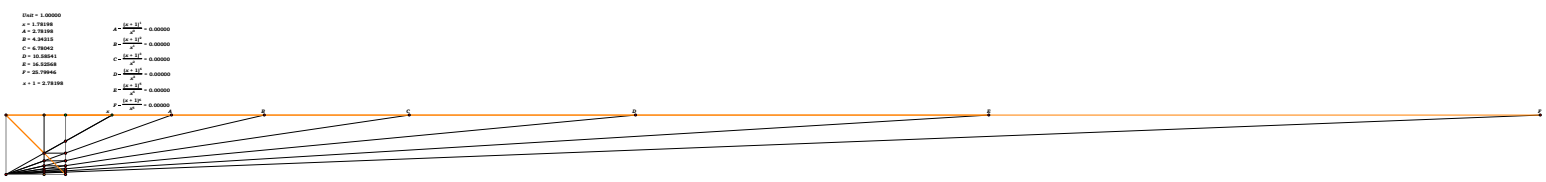
Unit = 1.00000

$x = 1.86020$
$A = 2.86020$
$B = 3.86020$
$C = 4.86020$
$D = 5.86020$
$E = 6.86020$
$F = 7.86020$

$A - (x + 1) = 0.00000$
$B - (x + 2) = 0.00000$
$C - (x + 3) = 0.00000$
$D - (x + 4) = 0.00000$
$E - (x + 5) = 0.00000$
$F - (x + 6) = 0.00000$




Unit = 1.00000
x = –2.76602
A = –1.76602
B = –0.76602
C = 0.23398
D = 1.23398
E = 2.23398
F = 3.23398
A – (x + 1) = 0.00000
B – (x + 2) = 0.00000
C – (x + 3) = 0.00000
D – (x + 4) = 0.00000
E – (x + 5) = 0.00000
F – (x + 6) = 0.00000
x
A
B
C
y
D
E
F


Unit = 1.00000
x = 1.78198
A = 2.78198
B = 4.34315
C = 6.78042
D = 10.58541
E = 16.52568
F = 25.79946
x + 1 = 2.78198
A = (x + 1)^2 / x^2 = 0.00000
B = (x + 1)^2 / x^2 = 0.00000
C = (x + 1)^2 / x^2 = 0.00000
D = (x + 1)^2 / x^2 = 0.00000
E = (x + 1)^2 / x^2 = 0.00000
F = (x + 1)^2 / x^2 = 0.00000
x
A
B
C
D
E
F

$Unit = 1.00000$

$x = -0.43572$

$A = 0.56428$

$B = -0.73076$

$C = 0.94636$

$D = -1.22557$

$E = 1.58716$

$F = -2.05543$

$x + 1 = 0.56428$

$$A - \frac{(x+1)^1}{x^0} = 0.00000$$

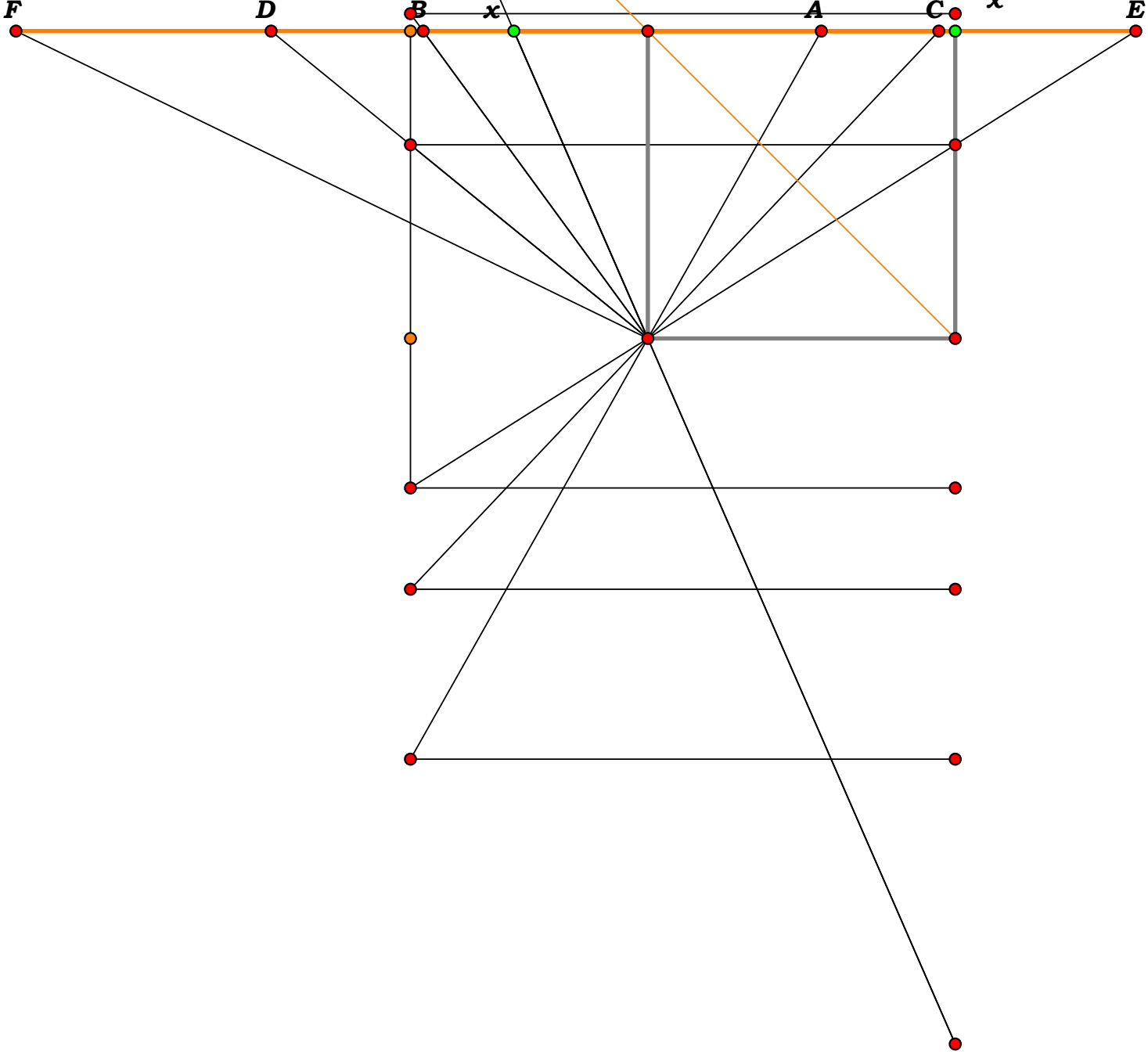
$$B - \frac{(x+1)^2}{x^1} = 0.00000$$

$$C - \frac{(x+1)^3}{x^2} = 0.00000$$

$$D - \frac{(x+1)^4}{x^3} = 0.00000$$

$$E - \frac{(x+1)^5}{x^4} = 0.00000$$

$$F - \frac{(x+1)^6}{x^5} = 0.00000$$



$Unit = 1.00000$

$x = 1.51503$

$A = 0.60239$

$B = 0.37593$

$C = 0.27322$

$D = 0.21459$

$E = 0.17668$

$F = 0.15015$

$$A - \frac{x}{x + 1} = 0.00000$$

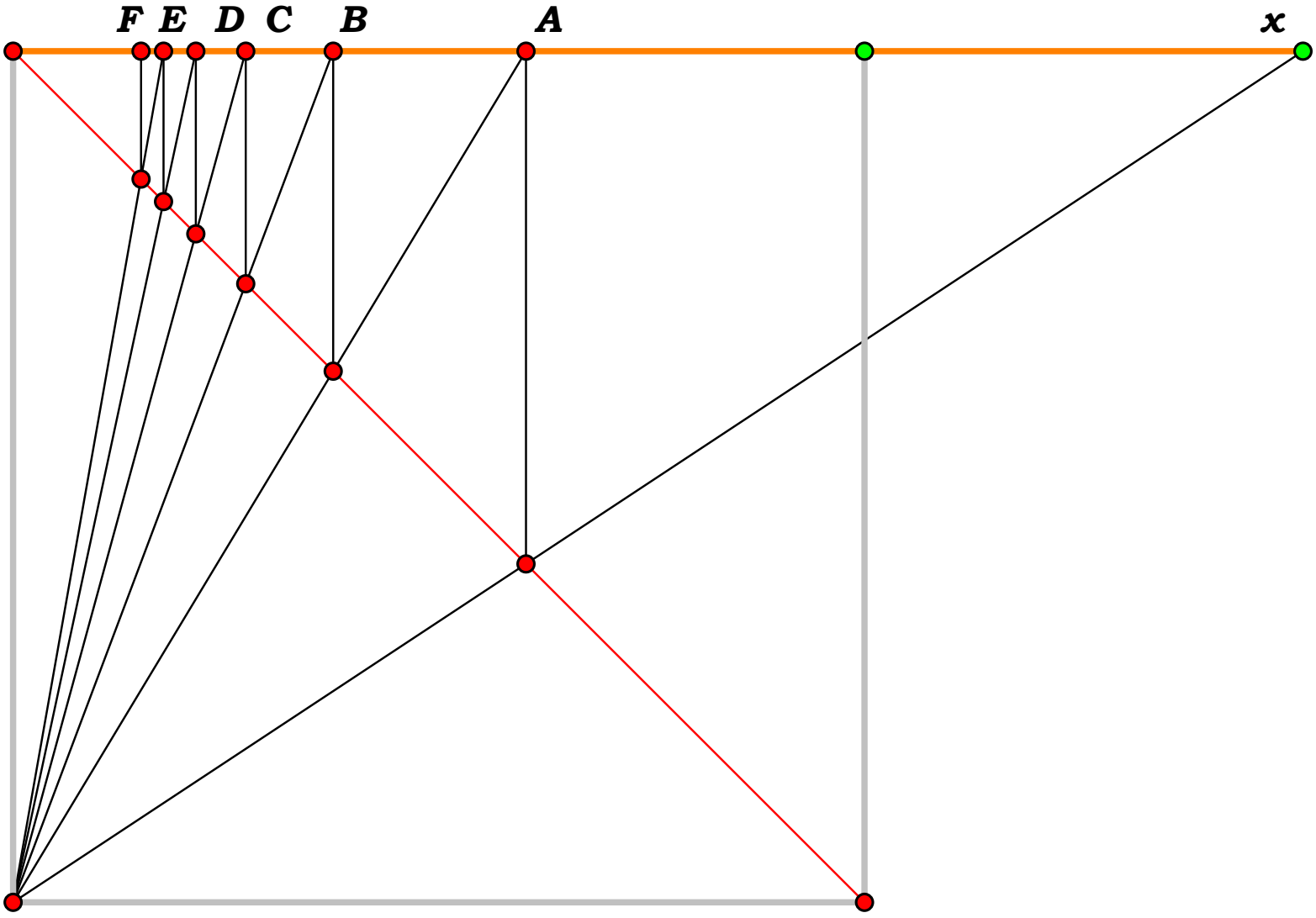
$$B - \frac{x}{2 \cdot x + 1} = 0.00000$$

$$C - \frac{x}{3 \cdot x + 1} = 0.00000$$

$$D - \frac{x}{4 \cdot x + 1} = 0.00000$$

$$E - \frac{x}{5 \cdot x + 1} = 0.00000$$

$$F - \frac{x}{6 \cdot x + 1} = 0.00000$$



$Unit = 1.00000$

$x = -1.43664$

$A = 3.29022$

$B = 0.76691$

$C = 0.43404$

$D = 0.30267$

$E = 0.23235$

$F = 0.18854$

$$A - \frac{x}{x+1} = 0.00000$$

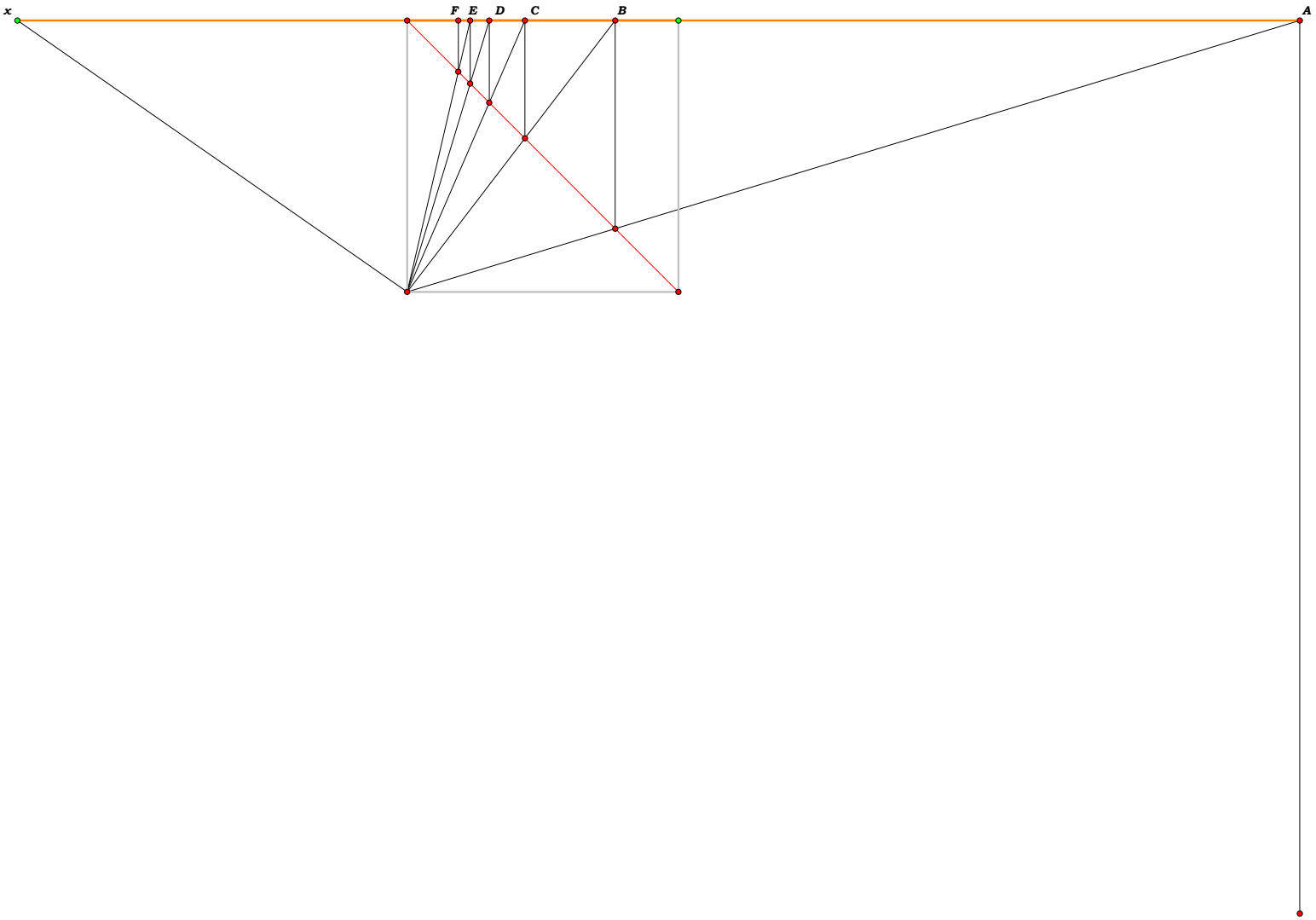
$$B - \frac{x}{2 \cdot x+1} = 0.00000$$

$$C - \frac{x}{3 \cdot x+1} = 0.00000$$

$$D - \frac{x}{4 \cdot x+1} = 0.00000$$

$$E - \frac{x}{5 \cdot x+1} = 0.00000$$

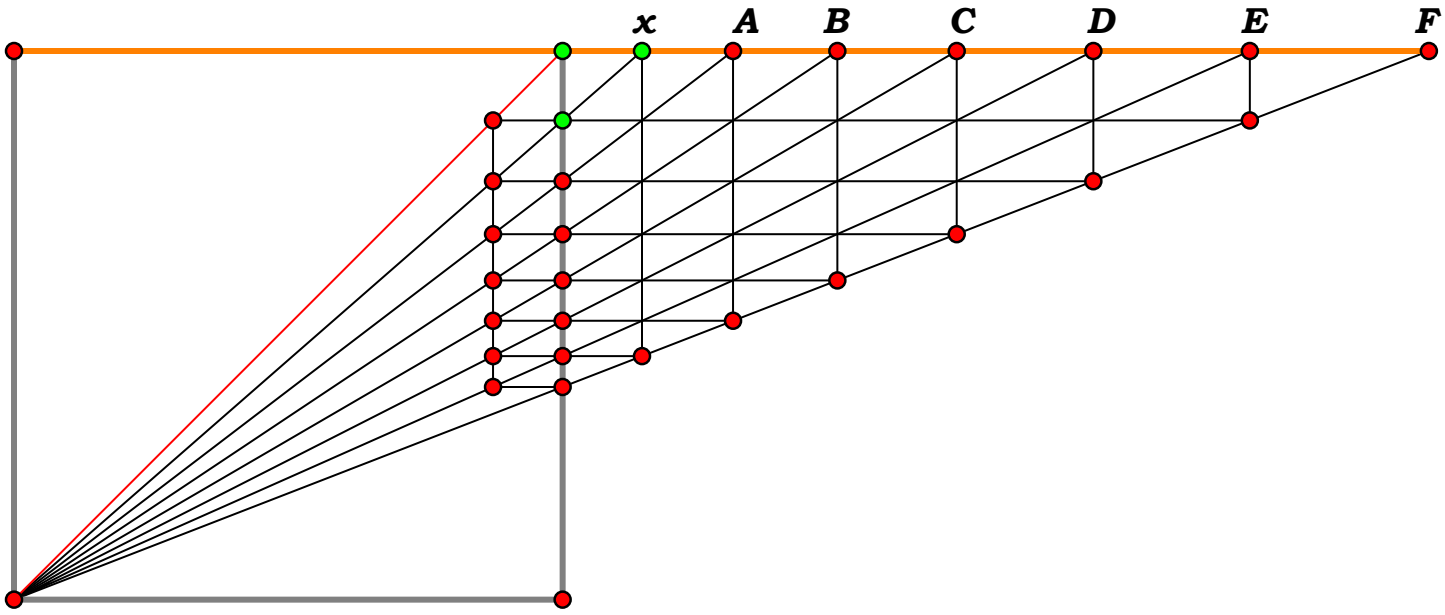
$$F - \frac{x}{6 \cdot x+1} = 0.00000$$

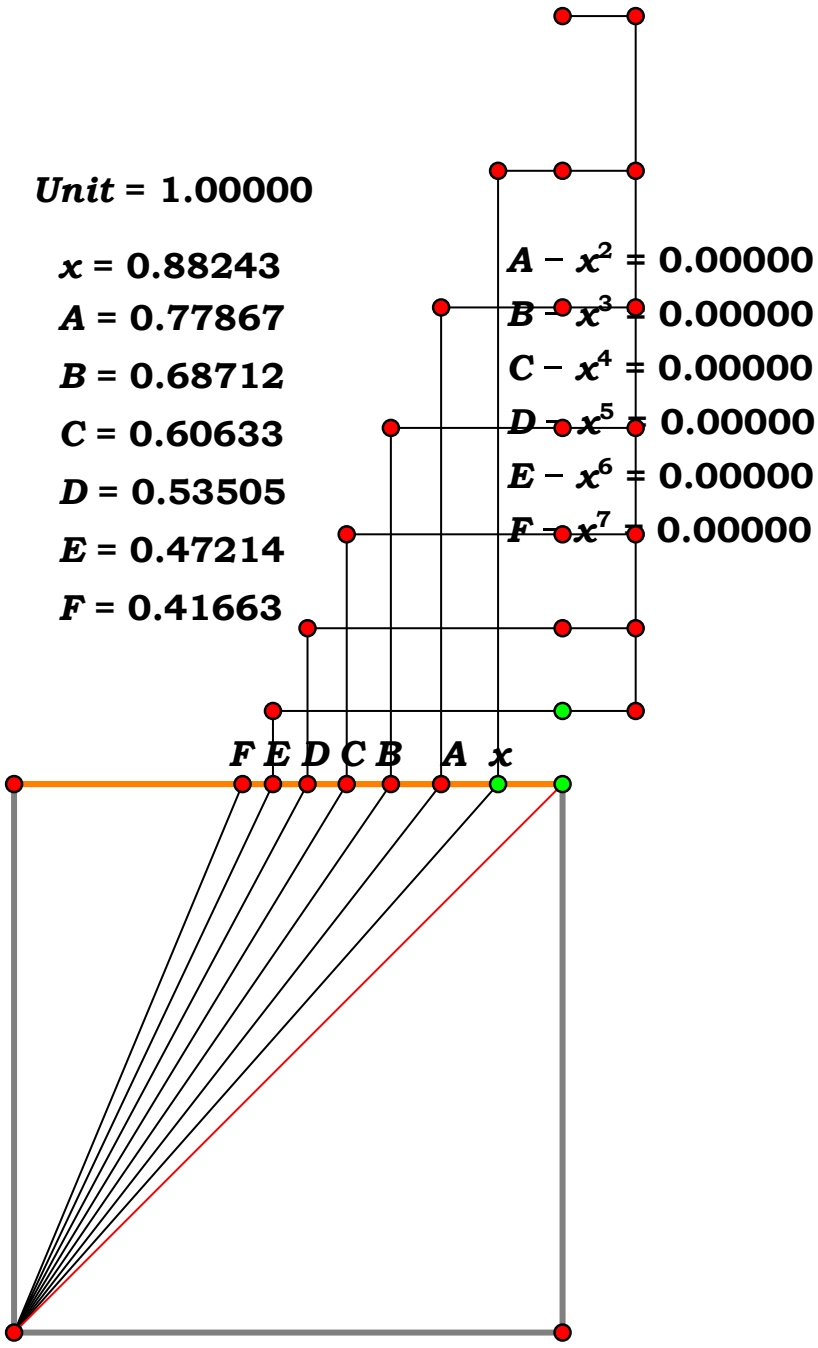


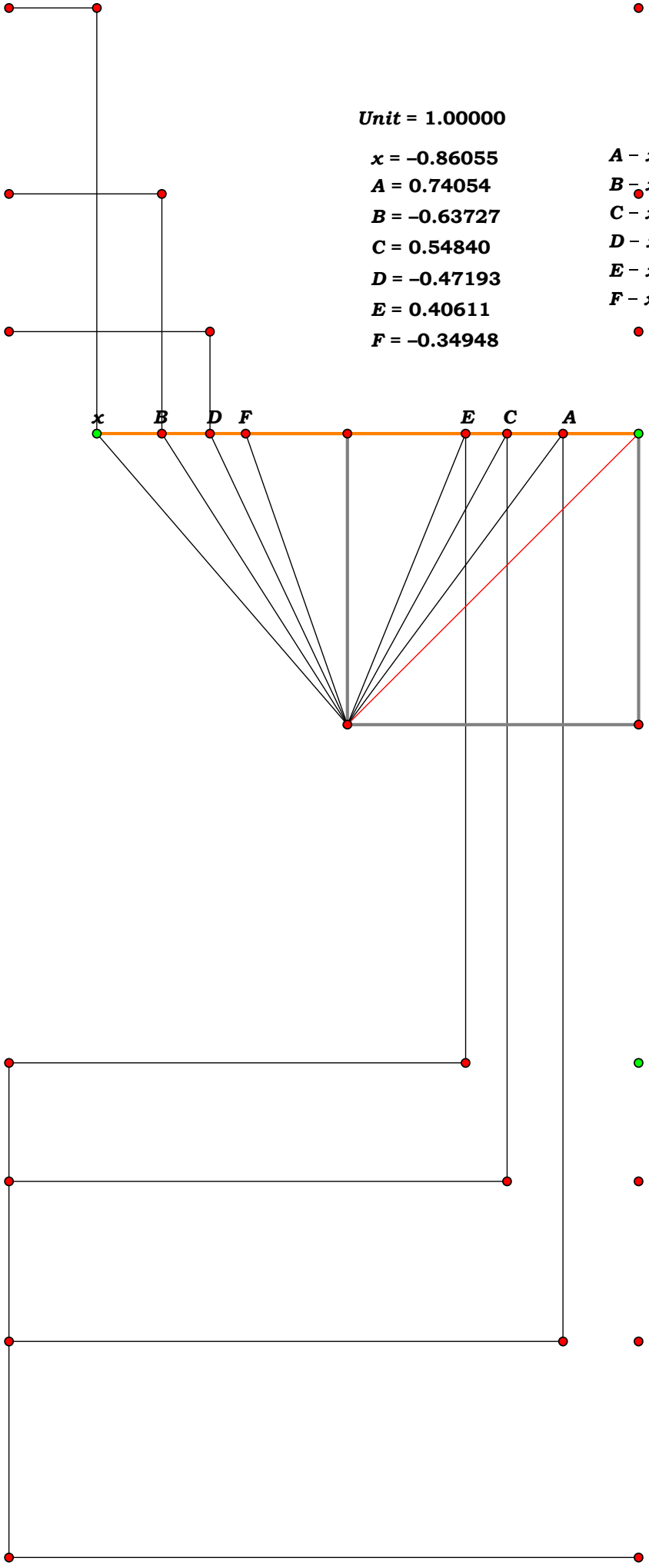
$Unit = 1.00000$

$x = 1.14497$
$A = 1.31095$
$B = 1.50099$
$C = 1.71858$
$D = 1.96771$
$E = 2.25296$
$F = 2.57957$

$A - x^2 = 0.00000$
$B - x^3 = 0.00000$
$C - x^4 = 0.00000$
$D - x^5 = 0.00000$
$E - x^6 = 0.00000$
$F - x^7 = 0.00000$




Unit = 1.00000
x = 0.88243
A = 0.77867
B = 0.68712
C = 0.60633
D = 0.53505
E = 0.47214
F = 0.41663
A − x² = 0.00000
B − x³ = 0.00000
C − x⁴ = 0.00000
D − x⁵ = 0.00000
E − x⁶ = 0.00000
F − x⁷ = 0.00000
F E D C B A x


Unit = 1.00000
x = –0.86055
A = 0.74054
B = –0.63727
C = 0.54840
D = –0.47193
E = 0.40611
F = –0.34948
A – x^2 = 0.00000
B – x^3 = 0.00000
C – x^4 = 0.00000
D – x^5 = 0.00000
E – x^6 = 0.00000
F – x^7 = 0.00000
x
B
D
F
E
C
A

$$Unit = 1.00000$$

$$x = 1.38171$$

$$A = 0.72374$$

$$B = 0.52380$$

$$C = 0.37910$$

$$D = 0.27437$$

$$E = 0.19857$$

$$F = 0.14371$$

$$A - \frac{1}{x} = 0.00000$$

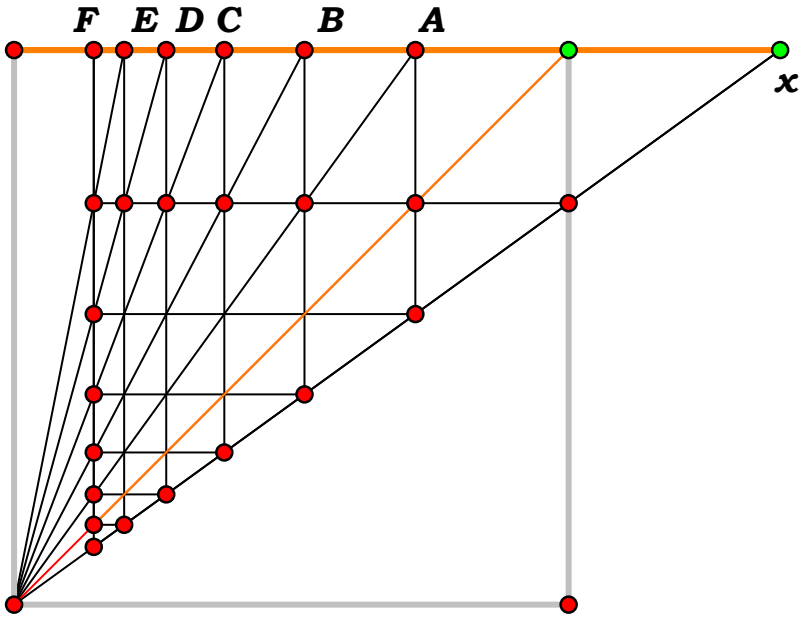
$$B - \frac{1}{x^2} = 0.00000$$

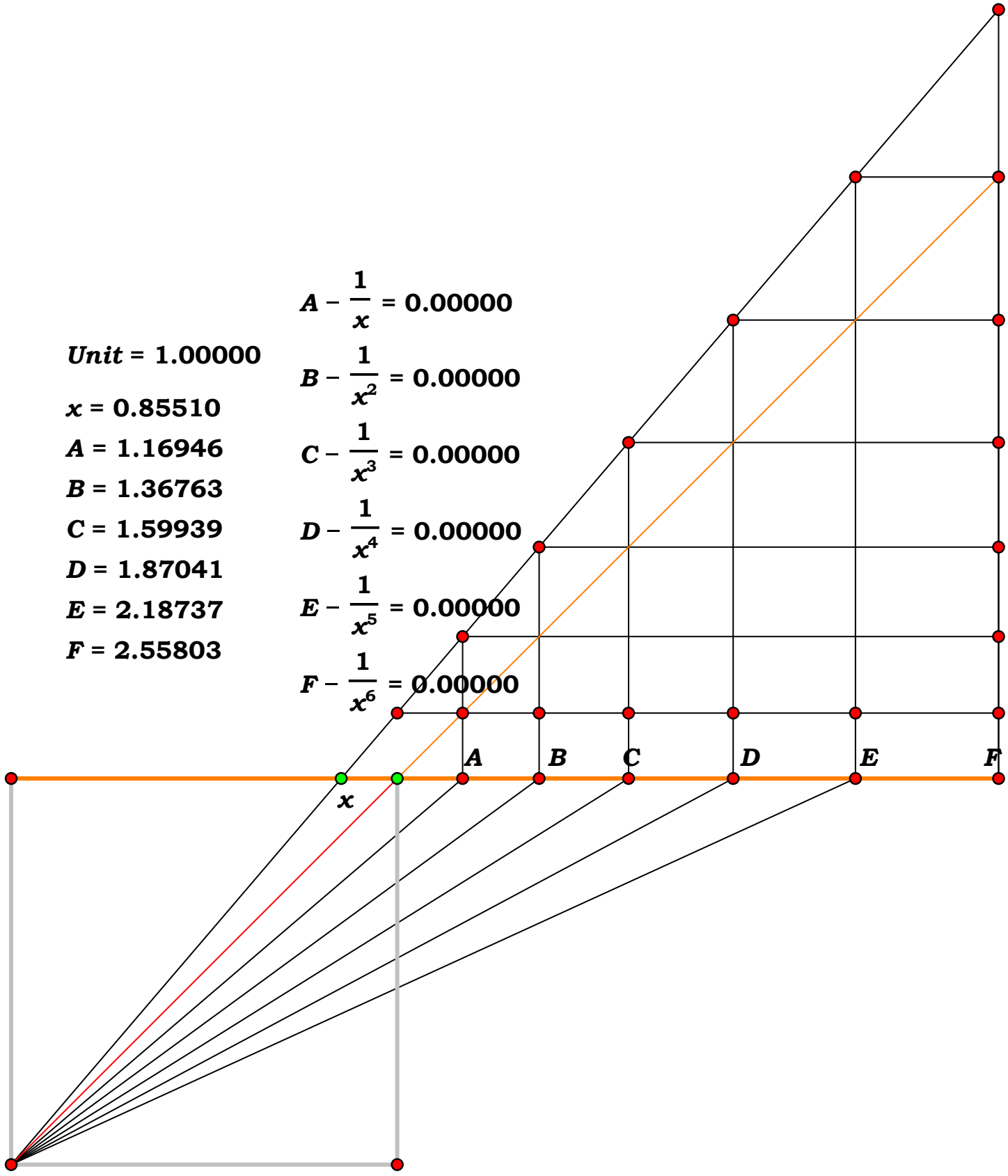
$$C - \frac{1}{x^3} = 0.00000$$

$$D - \frac{1}{x^4} = 0.00000$$

$$E - \frac{1}{x^5} = 0.00000$$

$$F - \frac{1}{x^6} = 0.00000$$




$A - \frac{1}{x} = 0.00000$
$B - \frac{1}{x^2} = 0.00000$
$C - \frac{1}{x^3} = 0.00000$
$D - \frac{1}{x^4} = 0.00000$
$E - \frac{1}{x^5} = 0.00000$
$F - \frac{1}{x^6} = 0.00000$
Unit = 1.00000
x = 0.85510
A = 1.16946
B = 1.36763
C = 1.59939
D = 1.87041
E = 2.18737
F = 2.55803
A
B
C
D
E
F
x

$Unit = 1.00000$

$x = -1.21167$

$A = -0.82530$

$B = 0.68113$

$C = -0.56214$

$D = 0.46394$

$E = -0.38289$

$F = 0.31600$

$$A - \frac{1}{x} = 0.00000$$

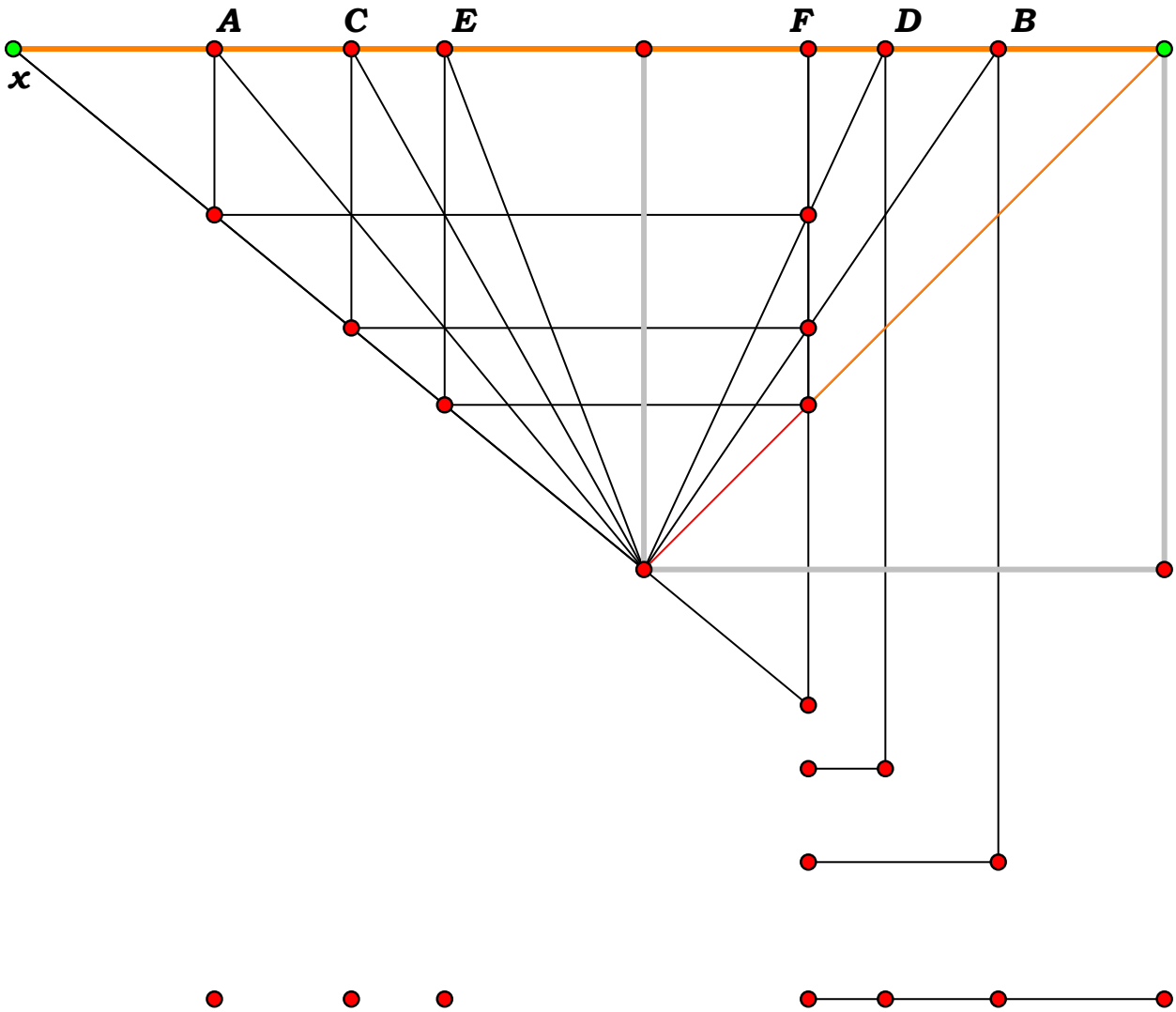
$$B - \frac{1}{x^2} = 0.00000$$

$$C - \frac{1}{x^3} = 0.00000$$

$$D - \frac{1}{x^4} = 0.00000$$

$$E - \frac{1}{x^5} = 0.00000$$

$$F - \frac{1}{x^6} = 0.00000$$



$Unit = 1.00000$

$x = 2.61267$

$A = 0.85350$

$B = 1.17164$

$C = 1.38275$

$D = 1.62009$

$E = 1.61267$

$F = 1.88947$

$G = 2.22992$

$H = 3.61267$

$$A - \frac{x^2 - 1}{x^2} = 0.00000$$

$$B - \frac{x^2}{x^2 - 1} = 0.00000$$

$$C - \frac{x + 1}{x} = 0.00000$$

$$D - \frac{x}{x - 1} = 0.00000$$

$$E - (x - 1) = 0.00000$$

$$F - \frac{x^2}{x + 1} = 0.00000$$

$$G - \frac{x^2 - 1}{x} = 0.00000$$

$$H - (x + 1) = 0.00000$$

$$B - \frac{1}{A} = 0.00000$$

$$\frac{1}{C} = 0.72320$$

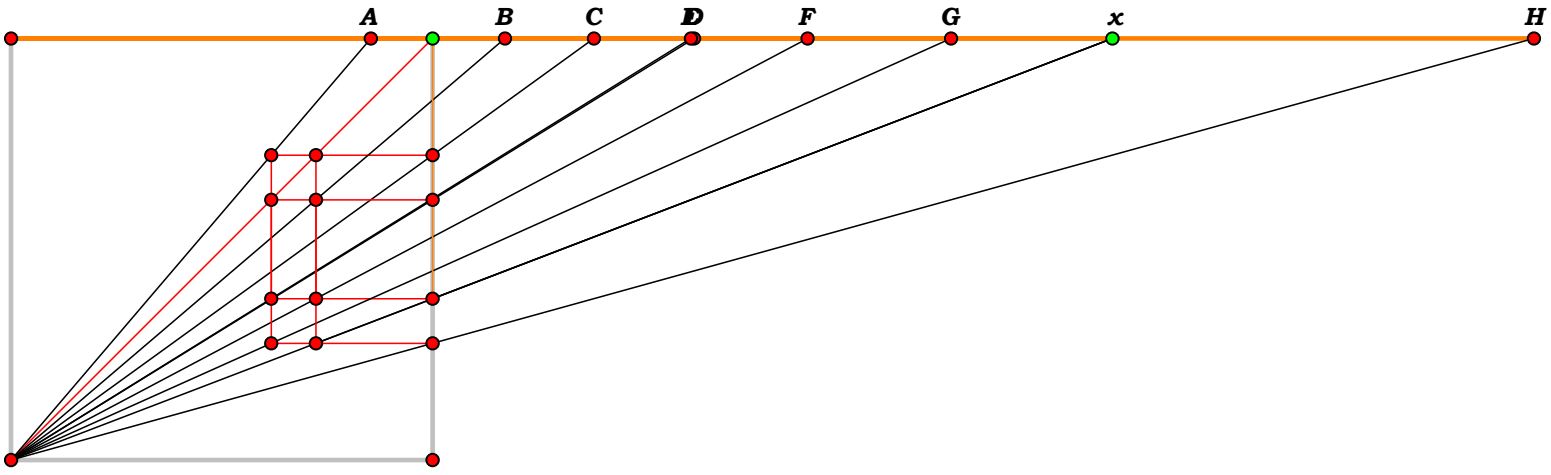
$$\frac{1}{D} - \frac{x - 1}{x} = 0.00000$$

$$\frac{1}{E} - \frac{1}{x - 1} = 0.00000$$

$$\frac{1}{F} - \frac{x + 1}{x^2} = 0.00000$$

$$\frac{1}{G} - \frac{x}{x^2 - 1} = 0.00000$$

$$\frac{1}{H} - \frac{1}{x + 1} = 0.00000$$



$Unit = 1.00000$

$x = -0.73727$

$A = -0.83971$

$B = -1.19088$

$C = -0.35636$

$D = 0.42438$

$E = -1.73727$

$F = 2.06888$

$G = 0.61909$

$H = 0.26273$

$$A - \frac{x^2 - 1}{x^2} = 0.00000$$

$$B - \frac{x^2}{x^2 - 1} = 0.00000$$

$$C - \frac{x + 1}{x} = 0.00000$$

$$D - \frac{x}{x - 1} = 0.00000$$

$$E - (x - 1) = 0.00000$$

$$F - \frac{x^2}{x + 1} = 0.00000$$

$$G - \frac{x^2 - 1}{x} = 0.00000$$

$$H - (x + 1) = 0.00000$$

$$B - \frac{1}{A} = 0.00000$$

$$\frac{1}{C} = -2.80614$$

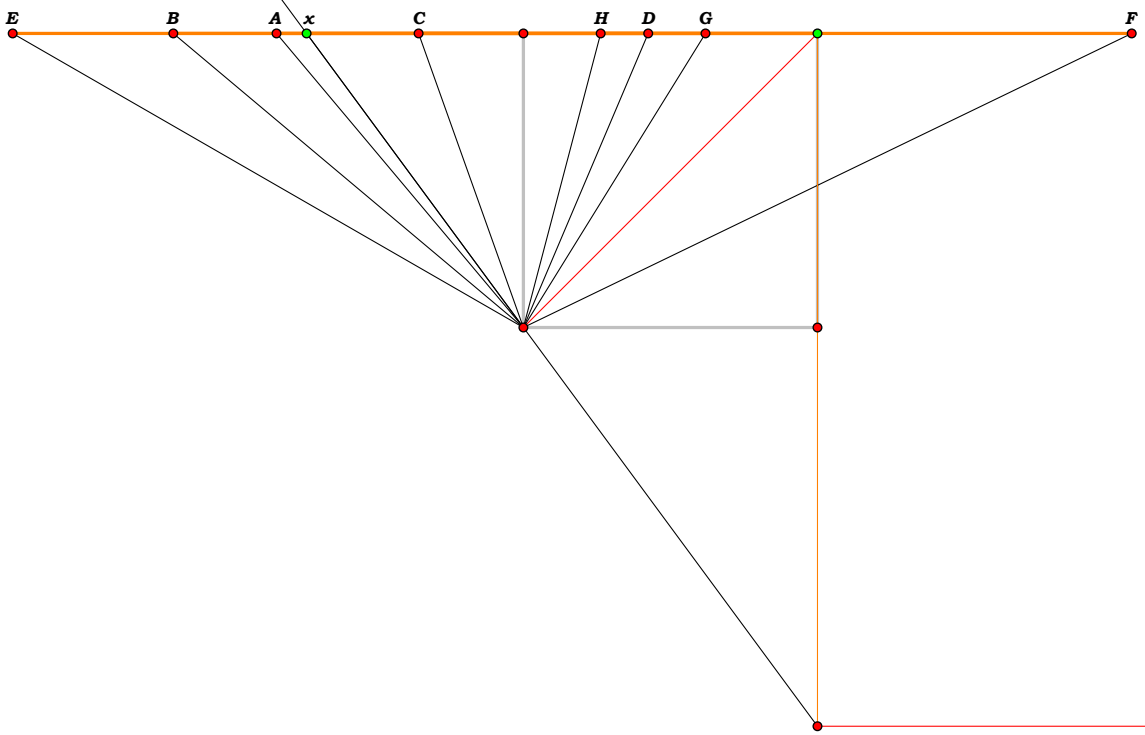
$$\frac{1}{D} - \frac{x - 1}{x} = 0.00000$$

$$\frac{1}{E} - \frac{1}{x - 1} = 0.00000$$

$$\frac{1}{F} - \frac{x + 1}{x^2} = 0.00000$$

$$\frac{1}{G} - \frac{x}{x^2 - 1} = 0.00000$$

$$\frac{1}{H} - \frac{1}{x + 1} = 0.00000$$



$Unit = 1.00000$

$x = 2.86674$

$A = 0.87832$

$B = 1.13854$

$C = 1.34883$

$D = 1.53569$

$E = 1.86674$

$F = 2.12535$

$G = 2.51791$

$H = 3.86674$

$A - \frac{x^2 - 1}{x^2} = 0.00000$

$B - \frac{x^2}{x^2 - 1} = 0.00000$

$C - \frac{x + 1}{x} = 0.00000$

$D - \frac{x}{x - 1} = 0.00000$

$E - (x - 1) = 0.00000$

$F - \frac{x^2}{x + 1} = 0.00000$

$G - \frac{x^2 - 1}{x} = 0.00000$

$H - (x + 1) = 0.00000$

$B - \frac{1}{A} = 0.00000$

$\frac{1}{C} = 0.74138$

$\frac{1}{D} - \frac{x - 1}{x} = 0.00000$

$\frac{1}{E} - \frac{1}{x - 1} = 0.00000$

$\frac{1}{F} - \frac{x + 1}{x^2} = 0.00000$

$\frac{1}{G} - \frac{x}{x^2 - 1} = 0.00000$

$\frac{1}{H} - \frac{1}{x + 1} = 0.00000$

$C_0 = 0.74138$

$D_0 = 0.65117$

$E_0 = 0.53569$

$F_0 = 0.47051$

$G_0 = 0.39716$

$x_0 = 0.34883$

$H_0 = 0.25862$

$C_0 - \frac{1}{C} = 0.00000$

$D_0 - \frac{1}{D} = 0.00000$

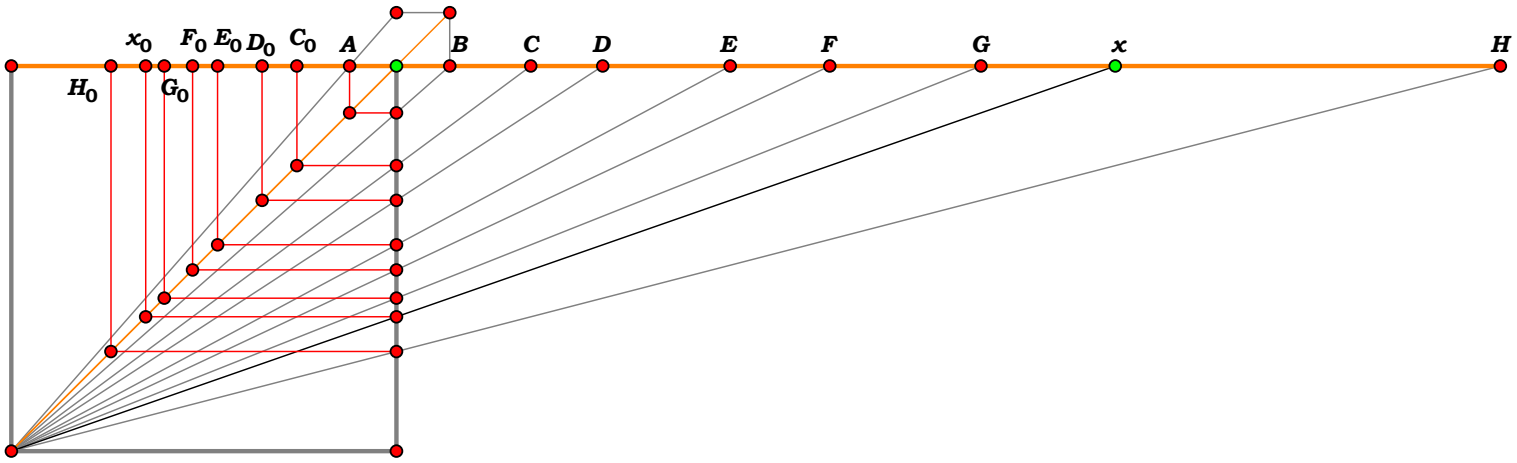
$E_0 - \frac{1}{E} = 0.00000$

$F_0 - \frac{1}{F} = 0.00000$

$G_0 - \frac{1}{G} = 0.00000$

$x_0 - \frac{1}{x} = 0.00000$

$H_0 - \frac{1}{H} = 0.00000$



$Unit = 1.00000$

$x = -2.14382$

$A = 0.78242$

$B = 1.27809$

$C = 0.53354$

$D = 0.68192$

$E = -3.14382$

$F = -4.01808$

$G = -1.67737$

$H = -1.14382$

$A - \frac{x^2 - 1}{x^2} = 0.00000$

$B - \frac{x^2}{x^2 - 1} = 0.00000$

$C - \frac{x + 1}{x} = 0.00000$

$D - \frac{x}{x - 1} = 0.00000$

$E - (x - 1) = 0.00000$

$F - \frac{x^2}{x + 1} = 0.00000$

$G - \frac{x^2 - 1}{x} = 0.00000$

$H - (x + 1) = 0.00000$

$B - \frac{1}{A} = 0.00000$

$\frac{1}{C} = 1.87426$

$\frac{1}{D} - \frac{x - 1}{x} = 0.00000$

$\frac{1}{E} - \frac{1}{x - 1} = 0.00000$

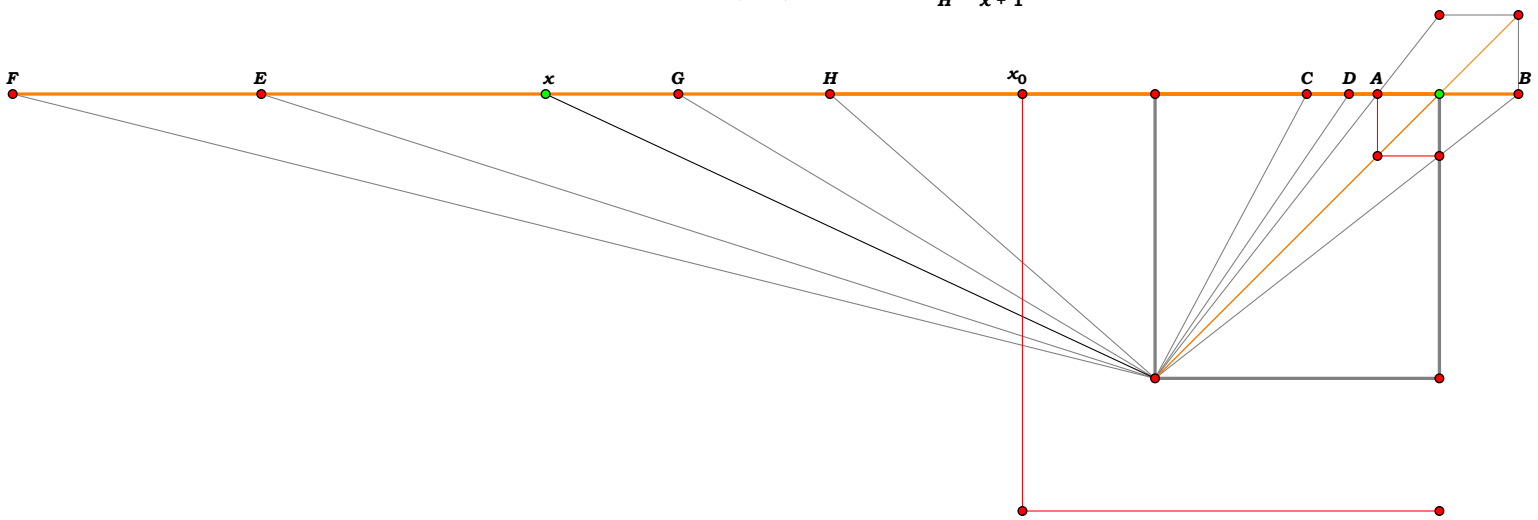
$\frac{1}{F} - \frac{x + 1}{x^2} = 0.00000$

$\frac{1}{G} - \frac{x}{x^2 - 1} = 0.00000$

$\frac{1}{H} - \frac{1}{x + 1} = 0.00000$

$x_0 = -0.46646$

$x_0 - \frac{1}{x} = 0.00000$



$Unit = 1.00000$

$x_E = -0.46231$

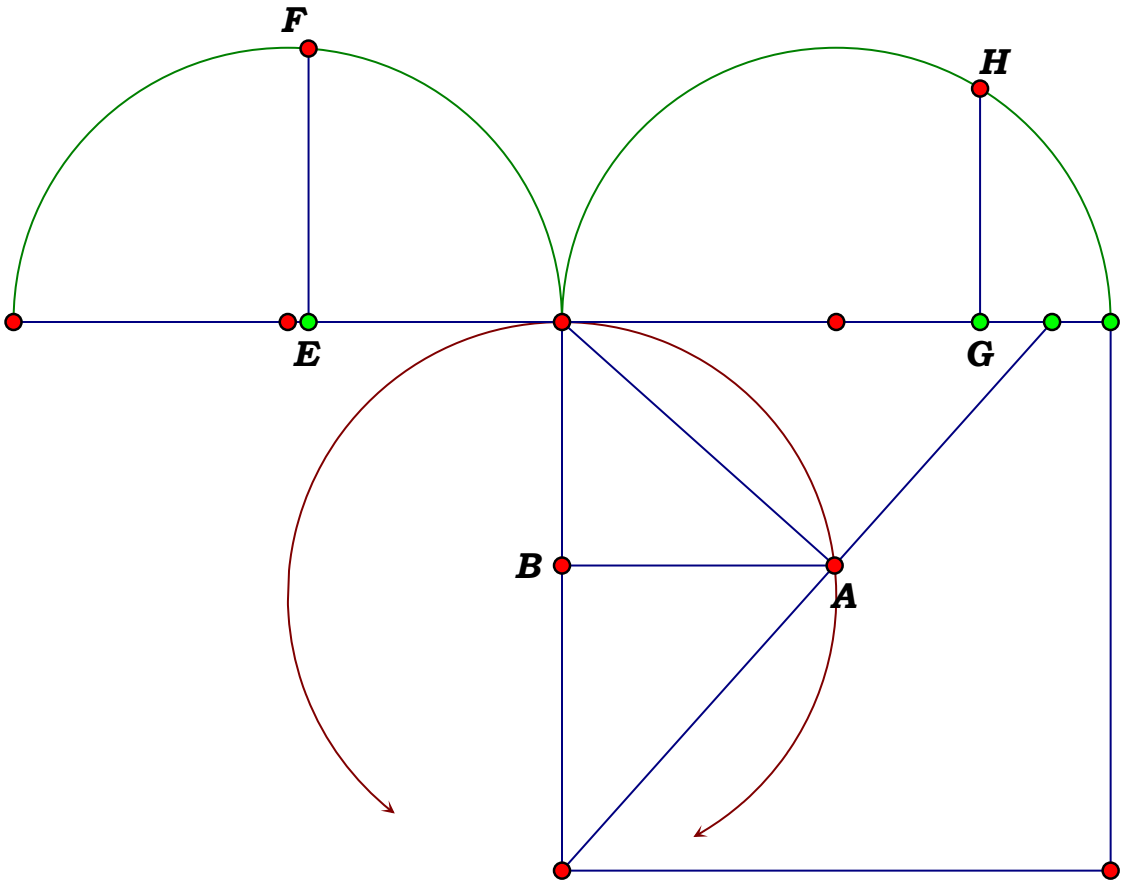
$y_F = 0.49858$

$\sqrt{x_E \cdot (-1 - x_E)} = 0.49858$

$x_G = 0.76220$

$y_H = 0.42574$

$\sqrt{x_G \cdot (1 - x_G)} = 0.42574$



$A = 0.49684$

$B = -0.44386$

$\frac{A}{\sqrt{A^2}} = 1.00000$

$A \cdot \frac{A}{\sqrt{A^2}} - \sqrt{B \cdot (-1 - B)} = 0.00000$

$Unit = 1.00000$

$x_E = -0.46231$

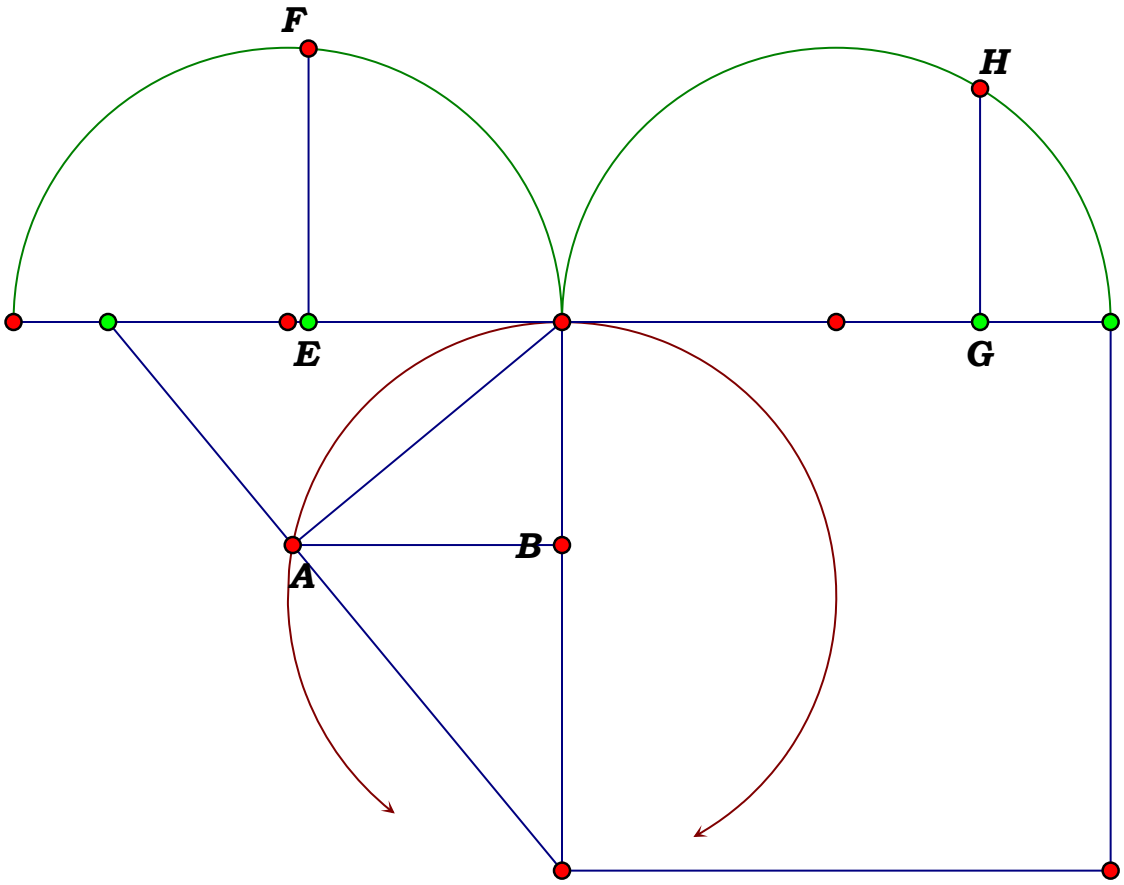
$y_F = 0.49858$

$\sqrt{x_E \cdot (-1 - x_E)} = 0.49858$

$x_G = 0.76220$

$y_H = 0.42574$

$\sqrt{x_G \cdot (1 - x_G)} = 0.42574$



$A = -0.49119$

$B = -0.40658$

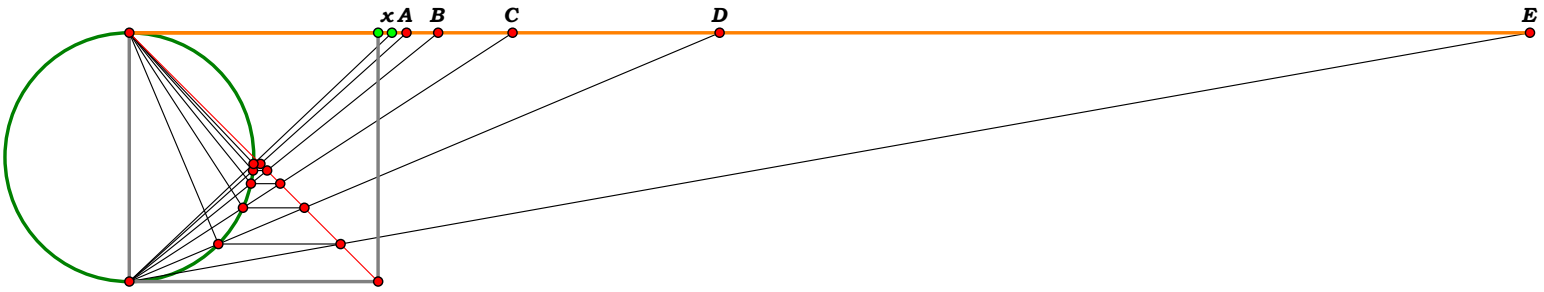
$\frac{A}{\sqrt{A^2}} = -1.00000$

$A \cdot \frac{A}{\sqrt{A^2}} - \sqrt{B \cdot (-1 - B)} = 0.00000$

$Unit = 1.00000$

$x = 1.05548$
$A = 1.11405$
$B = 1.24110$
$C = 1.54034$
$D = 2.37263$
$E = 5.62940$

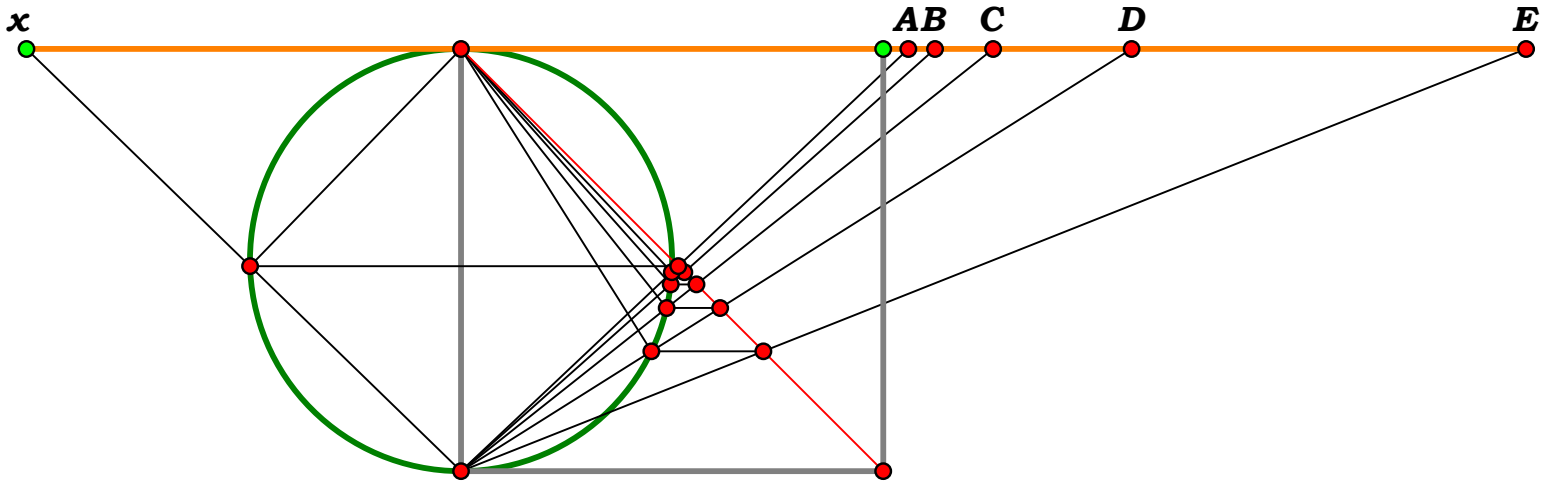
$A - x^2 = 0.00000$
$B - x^4 = 0.00000$
$C - x^8 = 0.00000$
$D - x^{16} = 0.00000$
$E - x^{32} = 0.00000$



$Unit = 1.00000$

$x = -1.02934$
$A = 1.05953$
$B = 1.12261$
$C = 1.26026$
$D = 1.58826$
$E = 2.52256$

$A - x^2 = 0.00000$
$B - x^4 = 0.00000$
$C - x^8 = 0.00000$
$D - x^{16} = 0.00000$
$E - x^{32} = 0.00000$

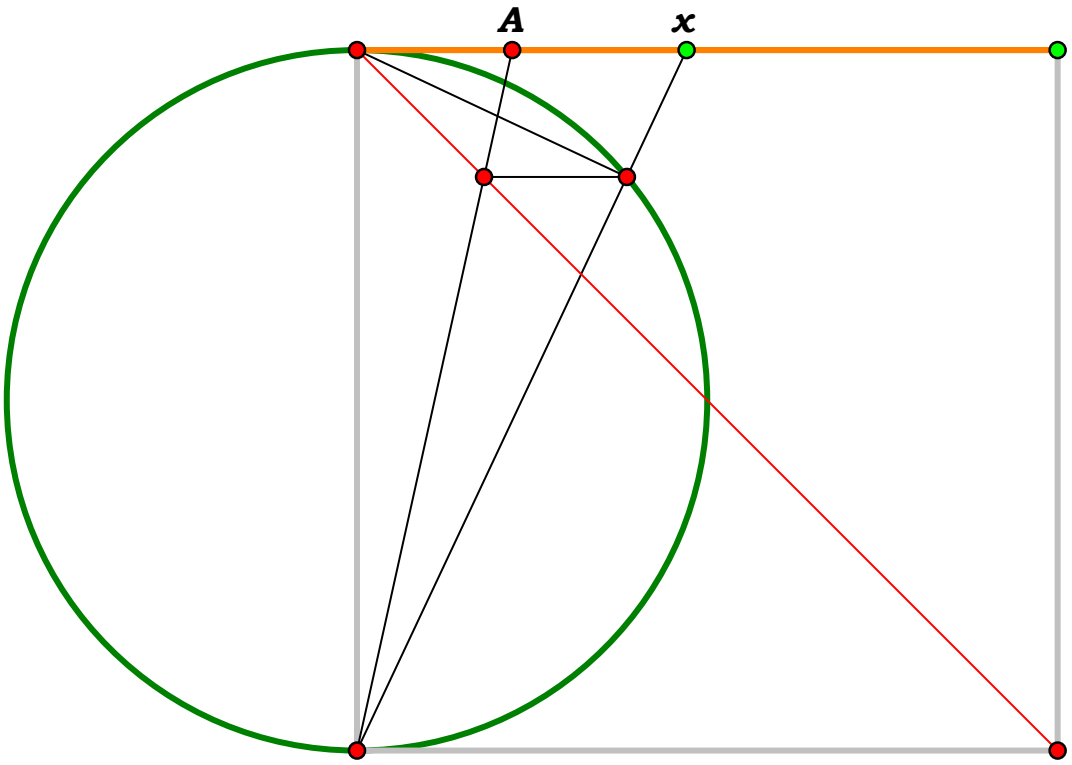


$Unit = 1.00000$

$x = 0.47050$

$A = 0.22137$

$A - x^2 = 0.00000$

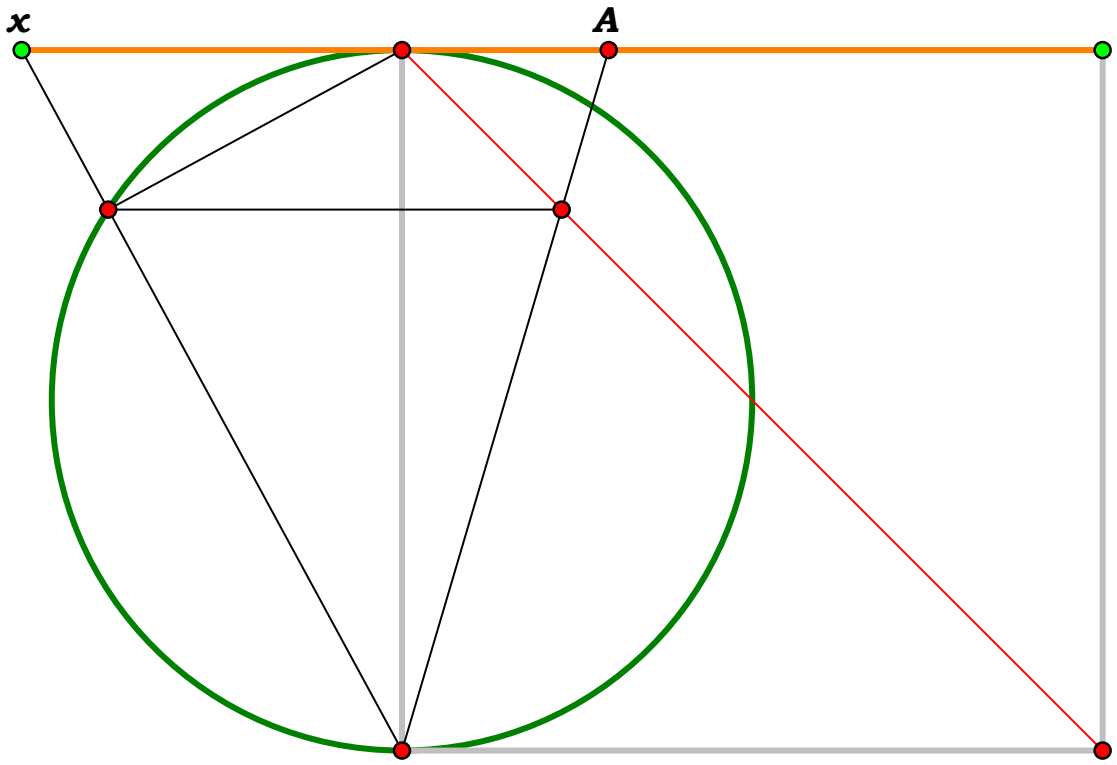


$Unit = 1.00000$

$x = -0.54308$

$A = 0.29493$

$A - x^2 = 0.00000$

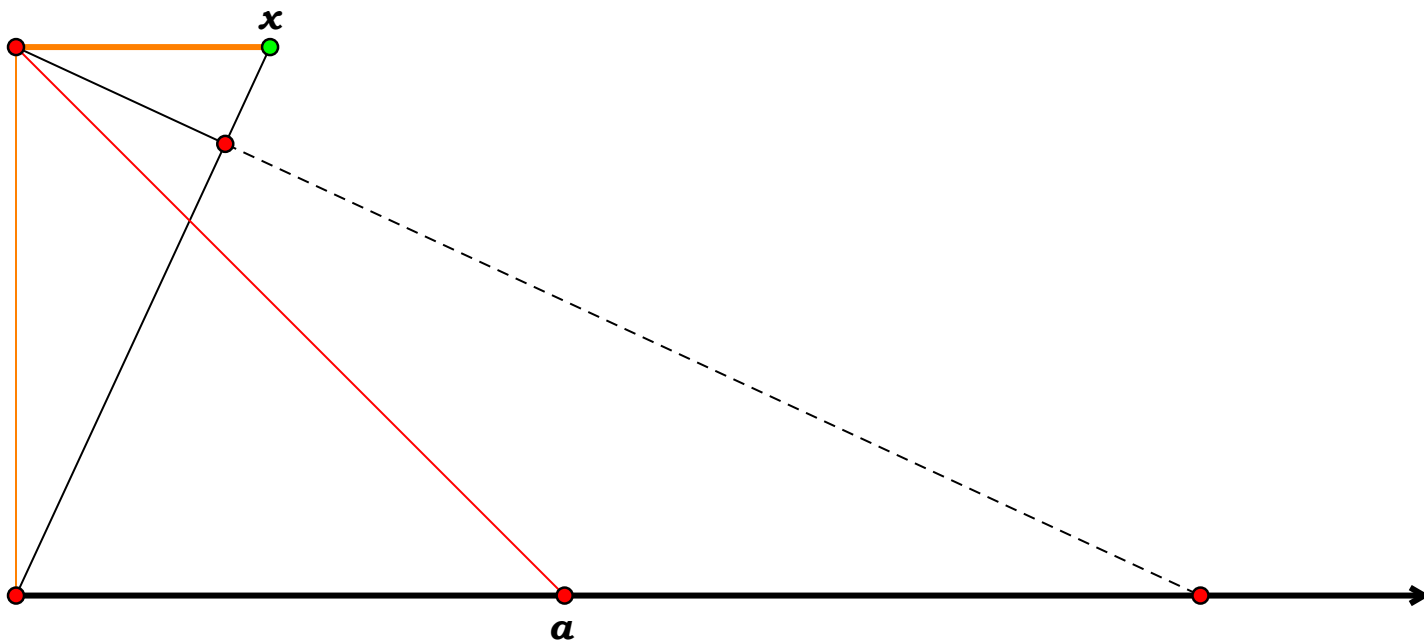


$Unit = 1.00000$

$x = 0.46309$

$\frac{x}{\sqrt{x^2}} = 1.00000$

$a = 1.00000$

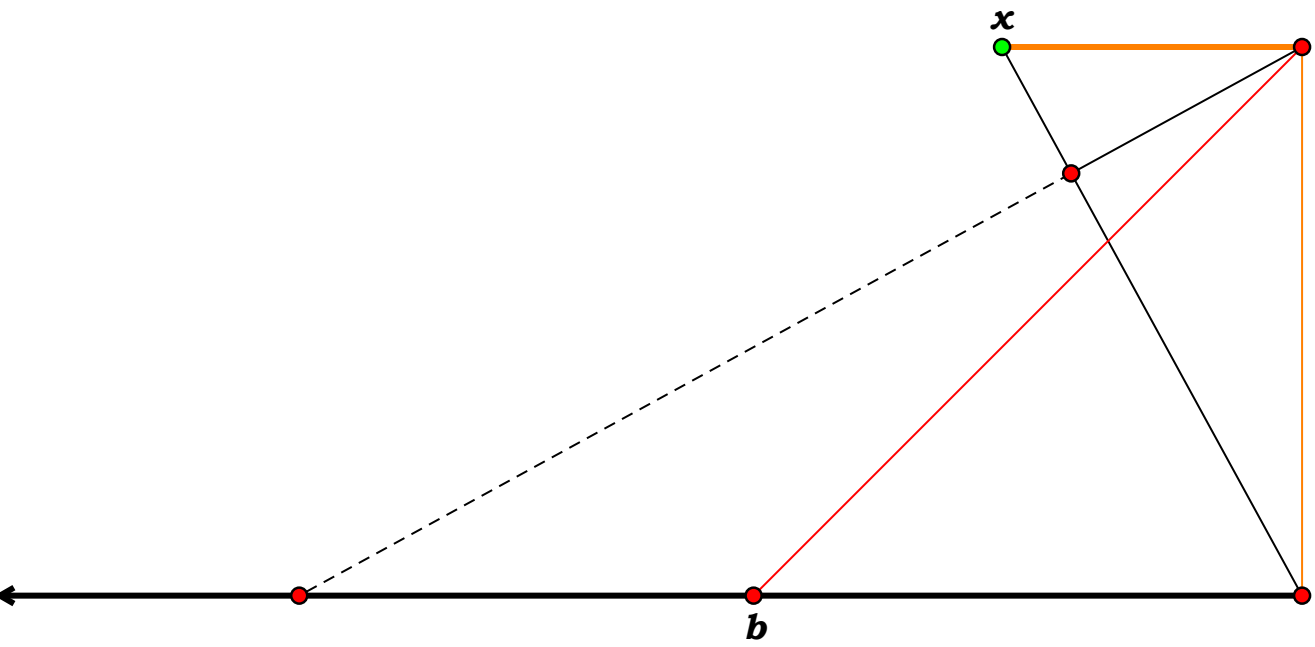


$Unit = 1.00000$

$x = -0.54696$

$\frac{x}{\sqrt{x^2}} = -1.00000$

$b = -1.00000$



$Unit = 1.00000$

$x = 2.54604$

$A = 0.84573$

$B = 1.18241$

$C = 1.39277$

$D = 1.64681$

$E = 1.54604$

$F = 1.82804$

$G = 2.15327$

$H = 3.54604$

$A - \frac{x^2 - 1}{x^2} = 0.00000$

$B - \frac{x^2}{x^2 - 1} = 0.00000$

$C - \frac{x + 1}{x} = 0.00000$

$D - \frac{x}{x - 1} = 0.00000$

$E - (x - 1) = 0.00000$

$F - \frac{x^2}{x + 1} = 0.00000$

$G - \frac{x^2 - 1}{x} = 0.00000$

$H - (x + 1) = 0.00000$

$A_1 = 0.71527$

$B_1 = 1.39808$

$C_1 = 1.93980$

$D_1 = 2.71200$

$E_1 = 2.39023$

$F_1 = 3.34174$

$G_1 = 4.63657$

$H_1 = 12.57438$

$A_1 - \frac{(x^2 - 1)^2}{x^4} = 0.00000$

$B_1 - \frac{x^4}{(x^2 - 1)^2} = 0.00000$

$C_1 - \frac{(x + 1)^2}{x^2} = 0.00000$

$D_1 - \frac{x^2}{(x - 1)^2} = 0.00000$

$E_1 - (x - 1)^2 = 0.00000$

$F_1 - \frac{x^4}{(x + 1)^2} = 0.00000$

$G_1 - \frac{(x^2 - 1)^2}{x^2} = 0.00000$

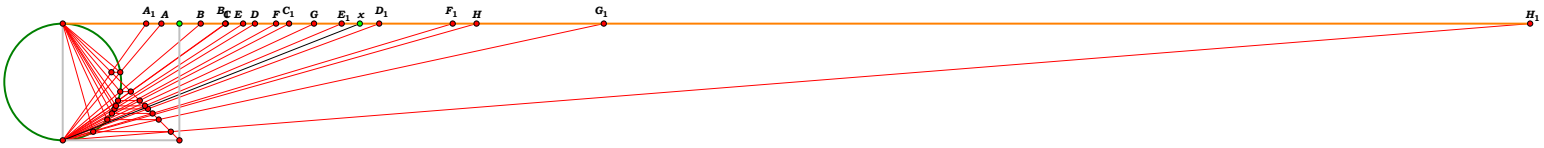
$H_1 - (x + 1)^2 = 0.00000$

$A_1 - \frac{x^4 - 2 \cdot x^2 + 1}{x^4} = 0.00000$

$B_1 - \frac{x^4}{x^4 - 2 \cdot x^2 + 1} = 0.00000$

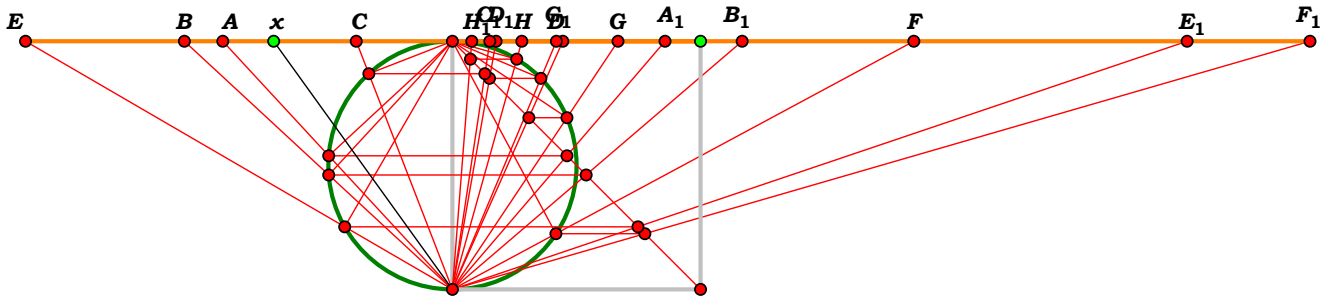
$E_1 - (x^2 - 2 \cdot x + 1) = 0.00000$

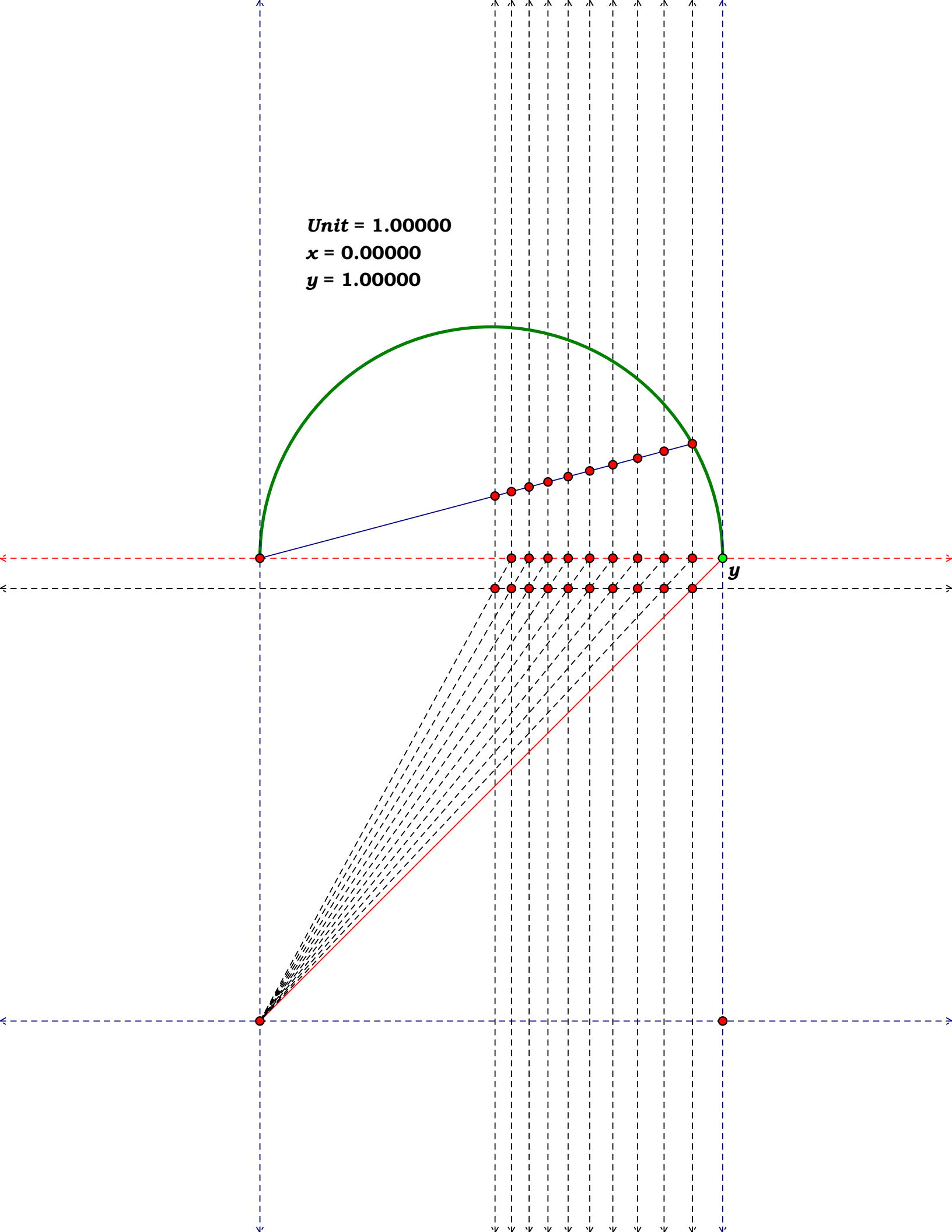
$H_1 - (x^2 + 2 \cdot x + 1) = 0.00000$

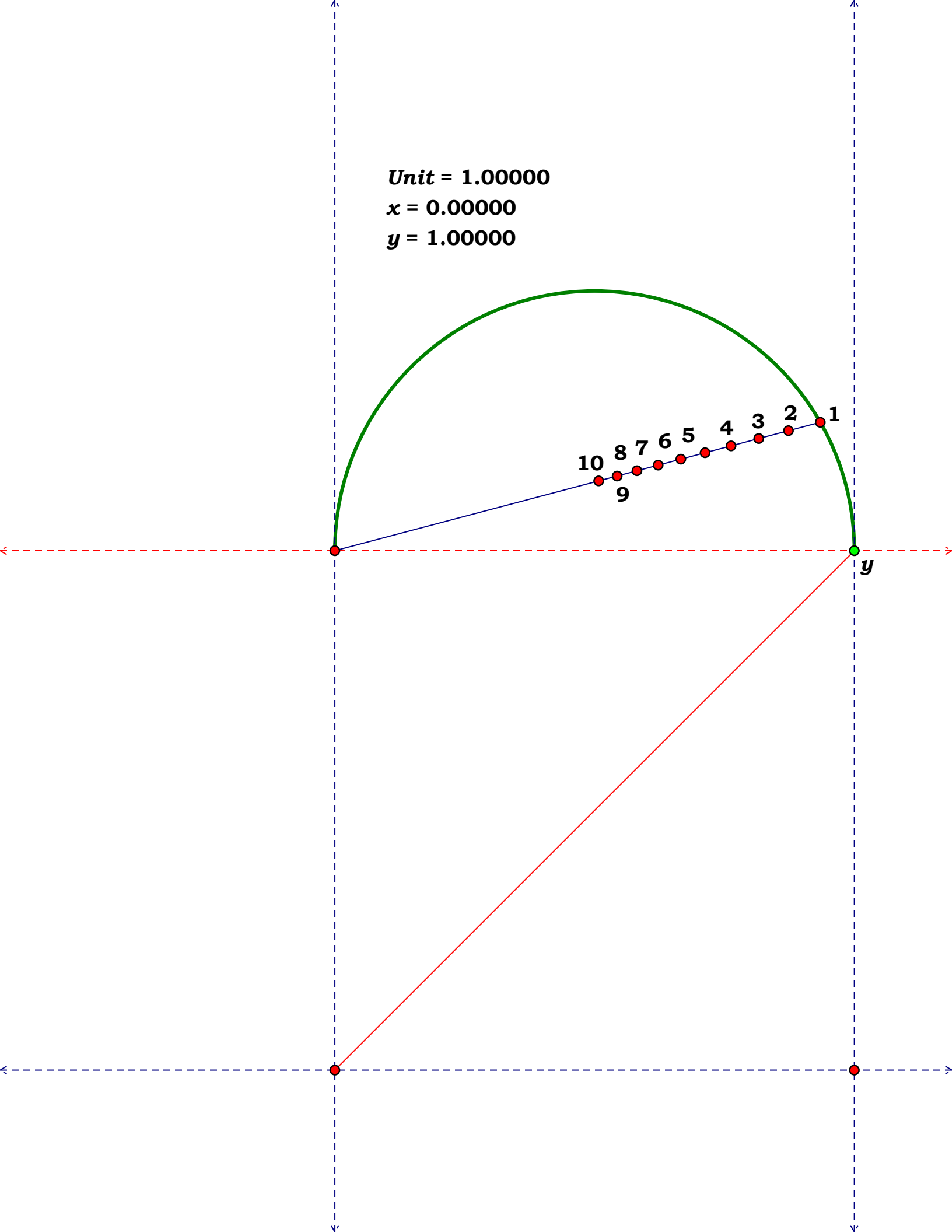


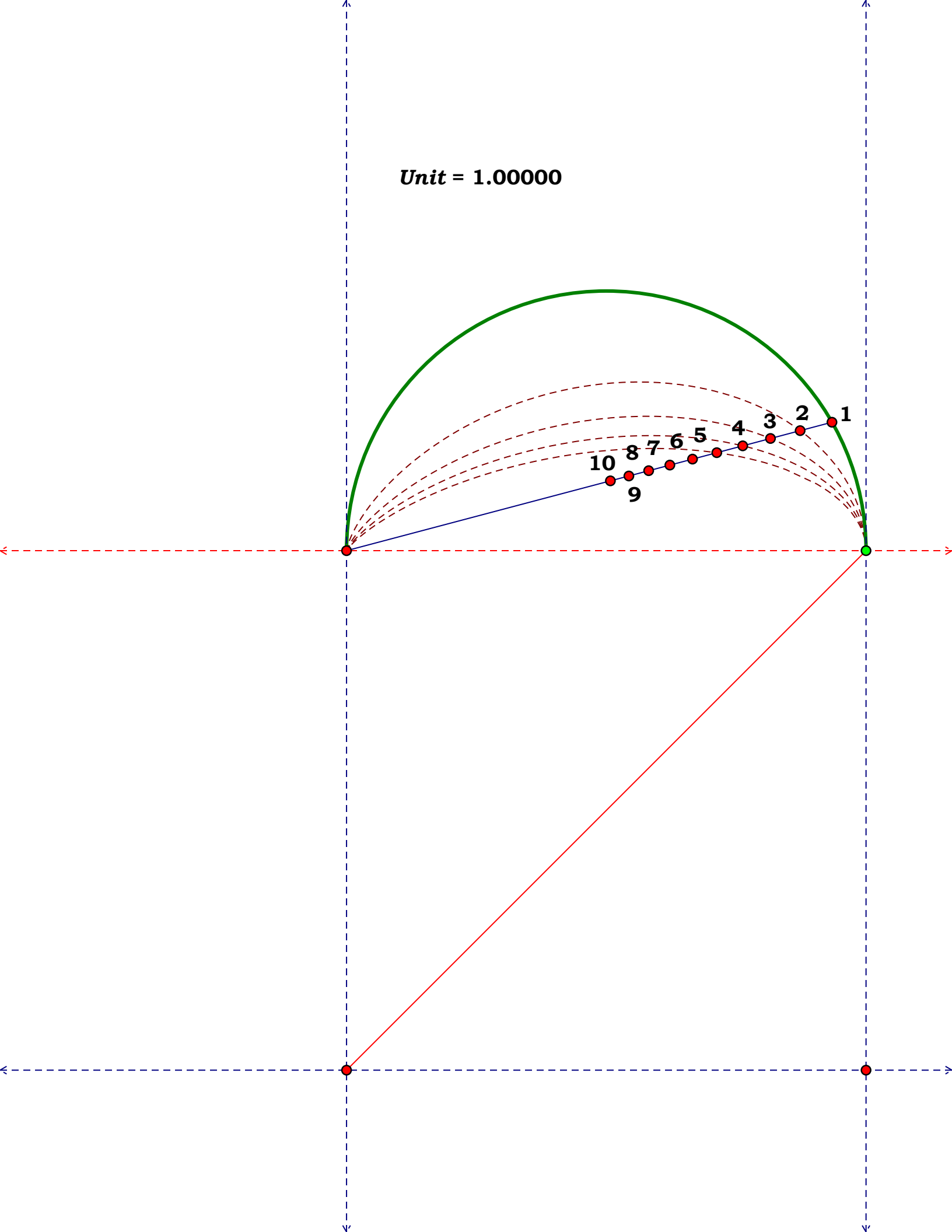
Unit = 1.00000

$x = -0.72064$	$A - \frac{x^2 - 1}{x^2} = 0.00000$	$A_1 = 0.85667$	$A_1 - \frac{(x^2 - 1)^2}{x^4} = 0.00000$	$A_1 - \frac{x^4 - 2 \cdot x^2 + 1}{x^4} = 0.00000$
$A = -0.92556$	$B - \frac{x^2}{x^2 - 1} = 0.00000$	$B_1 = 1.16731$	$B_1 - \frac{x^4}{(x^2 - 1)^2} = 0.00000$	$B_1 - \frac{x^4}{x^4 - 2 \cdot x^2 + 1} = 0.00000$
$B = -1.08042$				
$C = -0.38765$	$C - \frac{x + 1}{x} = 0.00000$	$C_1 = 0.15027$	$C_1 - \frac{(x + 1)^2}{x^2} = 0.00000$	
$D = 0.41882$	$D - \frac{x}{x - 1} = 0.00000$	$D_1 = 0.17541$	$D_1 - \frac{x^2}{(x - 1)^2} = 0.00000$	
$E = -1.72064$	$E - (x - 1) = 0.00000$	$E_1 = 2.96062$	$E_1 - (x - 1)^2 = 0.00000$	$E_1 - (x^2 - 2 \cdot x + 1) = 0.00000$
$F = 1.85902$	$F - \frac{x^2}{x + 1} = 0.00000$	$F_1 = 3.45596$	$F_1 - \frac{x^4}{(x + 1)^2} = 0.00000$	
$G = 0.66700$	$G - \frac{x^2 - 1}{x} = 0.00000$	$G_1 = 0.44489$	$G_1 - \frac{(x^2 - 1)^2}{x^2} = 0.00000$	
$H = 0.27936$	$H - (x + 1) = 0.00000$	$H_1 = 0.07804$	$H_1 - (x + 1)^2 = 0.00000$	$H_1 - (x^2 + 2 \cdot x + 1) = 0.00000$




Unit = 1.00000
x = 0.00000
y = 1.00000
y


Unit = 1.00000
x = 0.00000
y = 1.00000
1
2
3
4
5
6
7
8
9
10
y


Unit = 1.00000
1
2
3
4
5
6
7
8
9
10

$Unit = 1.00000$

$x = 1.15596$

$A = 1.33624$

$B = 1.54464$

$C = 1.78554$

$D = 2.06401$

$a = 0.86508$

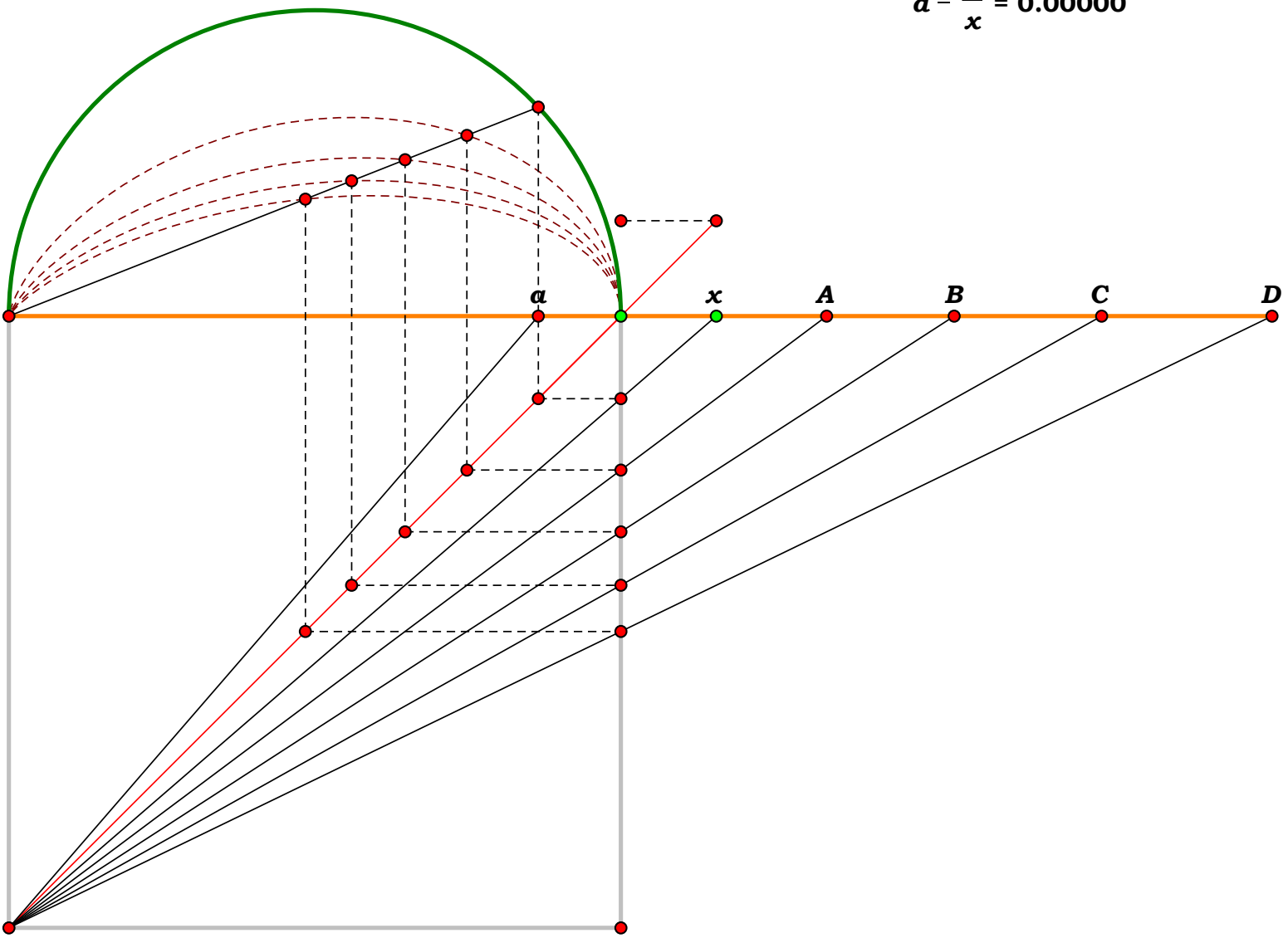
$A - x^2 = 0.00000$

$B - x^3 = 0.00000$

$C - x^4 = 0.00000$

$D - x^5 = 0.00000$

$a - \frac{1}{x} = 0.00000$

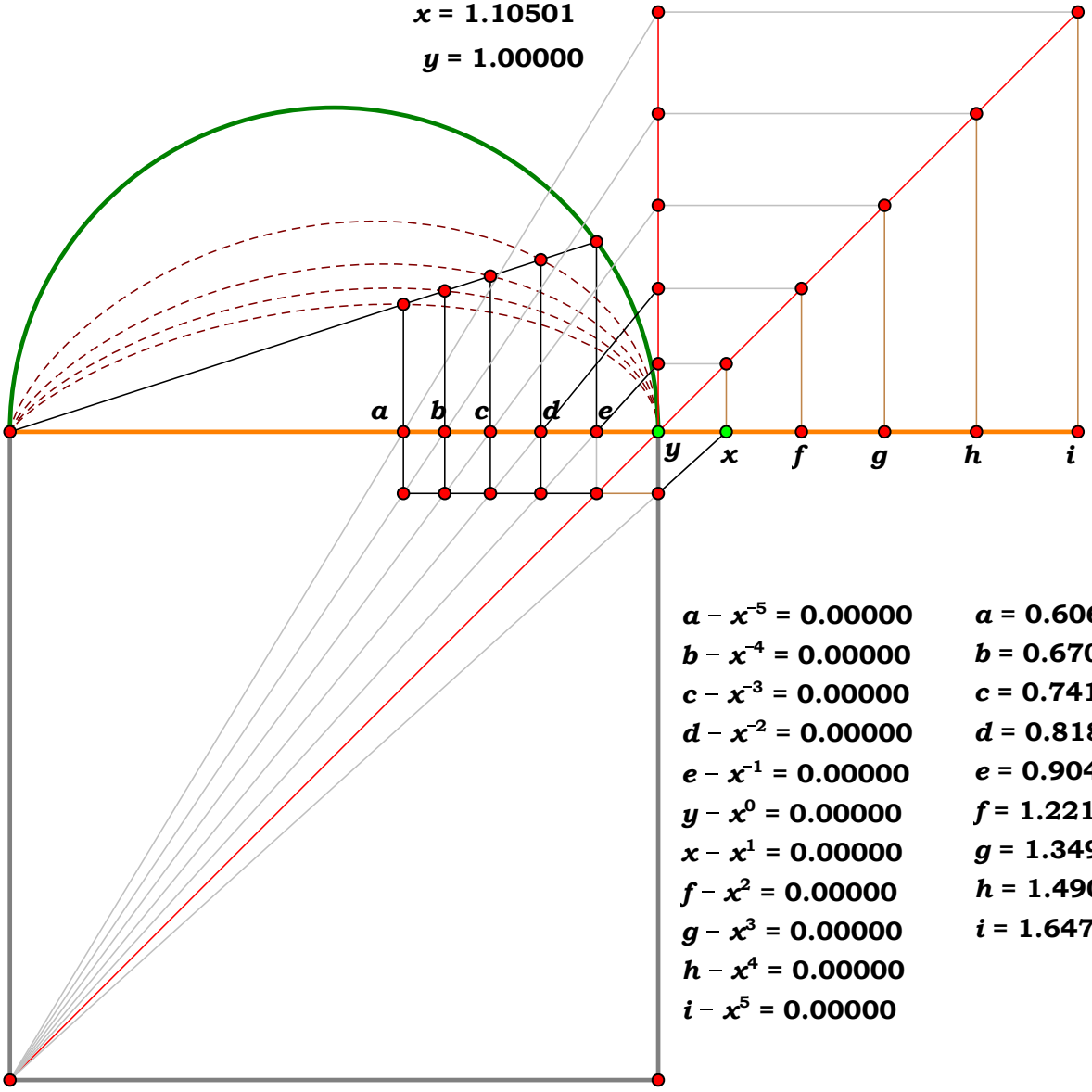


Unit = 1.00000

x = 1.10501

y = 1.00000

e = 0.90497



$x - x^1 = 0.00000$

$y - x^0 = 0.00000$

$e - x^{-1} = 0.00000$

$a - x^{-5} = 0.00000$

$b - x^{-4} = 0.00000$

$c - x^{-3} = 0.00000$

$d - x^{-2} = 0.00000$

$e - x^{-1} = 0.00000$

$y - x^0 = 0.00000$

$x - x^1 = 0.00000$

$f - x^2 = 0.00000$

$g - x^3 = 0.00000$

$h - x^4 = 0.00000$

$i - x^5 = 0.00000$

a = 0.60697

b = 0.67071

c = 0.74114

d = 0.81897

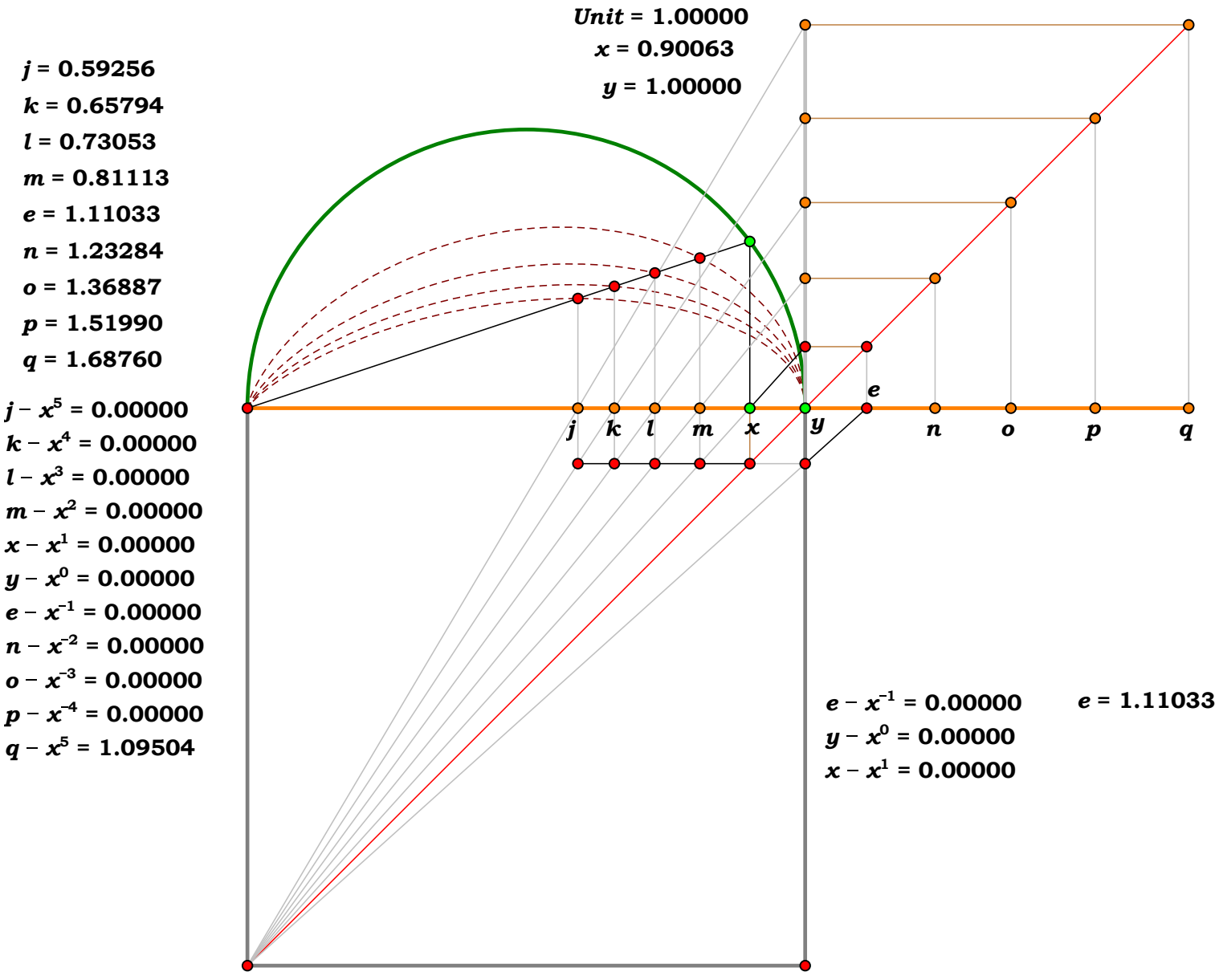
e = 0.90497

f = 1.22105

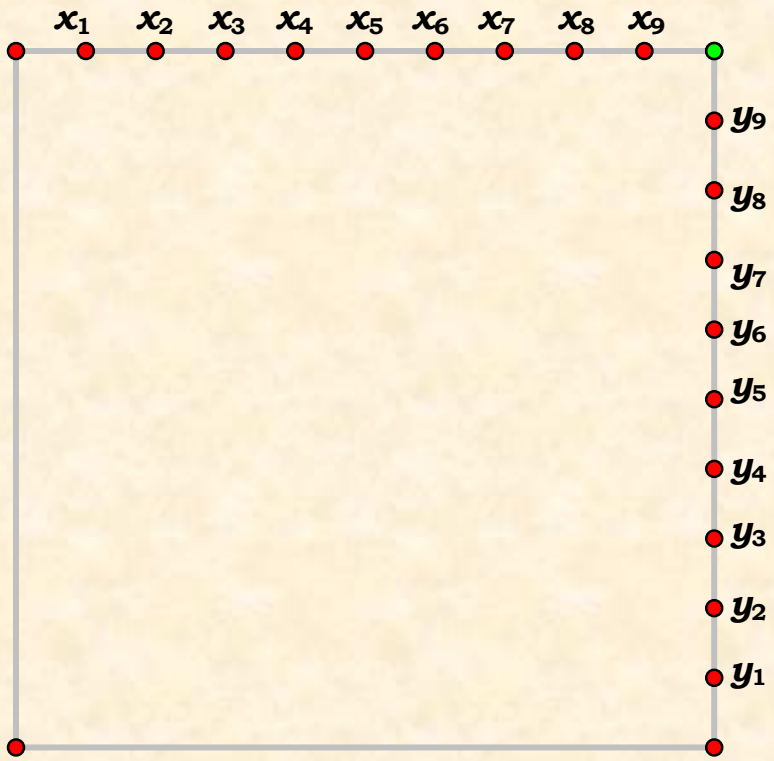
g = 1.34928

h = 1.49097

i = 1.64754


Unit = 1.00000
x = 0.90063
y = 1.00000
j = 0.59256
k = 0.65794
l = 0.73053
m = 0.81113
e = 1.11033
n = 1.23284
o = 1.36887
p = 1.51990
q = 1.68760
j − x^5 = 0.00000
k − x^4 = 0.00000
l − x^3 = 0.00000
m − x^2 = 0.00000
x − x^1 = 0.00000
y − x^0 = 0.00000
e − x^-1 = 0.00000
n − x^-2 = 0.00000
o − x^-3 = 0.00000
p − x^-4 = 0.00000
q − x^5 = 1.09504
e − x^-1 = 0.00000
y − x^0 = 0.00000
x − x^1 = 0.00000
e = 1.11033
j
k
l
m
x
y
e
n
o
p
q

Dot Box



By John Clark

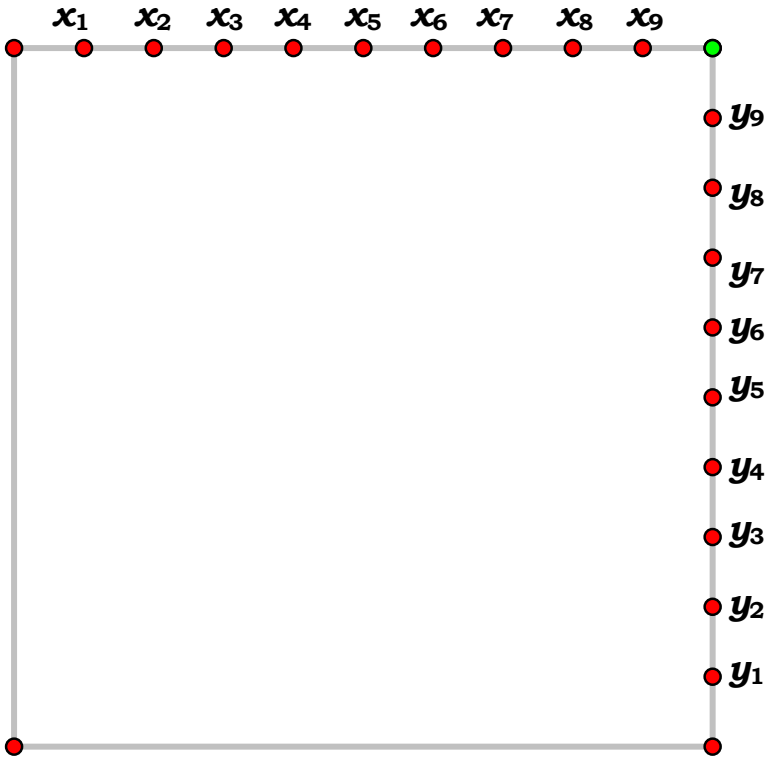
$Unit = 1.00000$

1x
2x
3x
4x
5x
6x
7x
8x
9x
10x
1y
2y
3y
4y
5y
6y
7y
8y
9y
10y

$x = 10.00000$
$y = 10.00000$
$x_1 = 0.10000$
$x_2 = 0.20000$
$x_3 = 0.30000$
$x_4 = 0.40000$
$x_5 = 0.50000$
$x_6 = 0.60000$
$x_7 = 0.70000$
$x_8 = 0.80000$
$x_9 = 0.90000$

$y_1 = 0.10000$
$y_2 = 0.20000$
$y_3 = 0.30000$
$y_4 = 0.40000$
$y_5 = 0.50000$
$y_6 = 0.60000$
$y_7 = 0.70000$
$y_8 = 0.80000$
$y_9 = 0.90000$

$$\frac{1}{x_1 \cdot y_1} = 100.00000$$



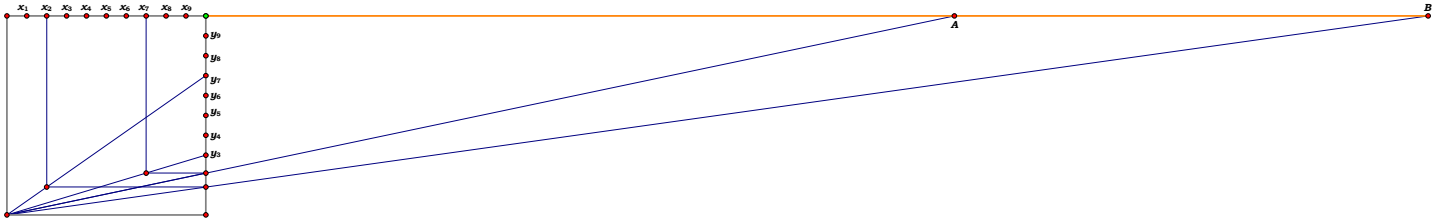
$Unit = 1.00000$

1x
2x
3x
4x
5x
6x
7x
8x
9x
10x
1y
2y
3y
4y
5y
6y
7y
8y
9y
10y
Show Intersections

$x = 10.00000$
$y = 10.00000$
$x_1 = 0.10000$
$x_2 = 0.20000$
$x_3 = 0.30000$
$x_4 = 0.40000$
$x_5 = 0.50000$
$x_6 = 0.60000$
$x_7 = 0.70000$
$x_8 = 0.80000$
$x_9 = 0.90000$

$y_1 = 0.10000$
$y_2 = 0.20000$
$y_3 = 0.30000$
$y_4 = 0.40000$
$y_5 = 0.50000$
$y_6 = 0.60000$
$y_7 = 0.70000$
$y_8 = 0.80000$
$y_9 = 0.90000$

$\frac{1}{x_1 \cdot y_1} = 100.00000$



$x_A = 4.76190$

$\frac{1}{x_7 \cdot y_3} = 4.76190$

$\frac{x \cdot y}{7 \cdot 3} = 4.76190$

$\frac{100}{7 \cdot 3} = 4.76190$

$B = 7.14286$

$\frac{1}{x_2 \cdot y_7} = 7.14286$

$\frac{x \cdot y}{2 \cdot 7} = 7.14286$

$\frac{100}{2 \cdot 7} = 7.14286$

$Unit = 1.00000$

1x
2x $x = 6.00000$ $y_1 = 0.33333$
3x $y = 3.00000$ $y_2 = 0.66667$
4x $x_1 = 0.16667$ $y_3 = 1.00000$
5x $x_2 = 0.33333$
6x $x_3 = 0.50000$
7x $x_4 = 0.66667$
8x $x_5 = 0.83333$
9x $x_6 = 1.00000$
10x

1y $\frac{1}{x_1 \cdot y_1} = 18.00000$
2y
3y
4y
5y
6y
7y
8y
9y
10y

$A = 4.50000$

$\frac{1}{x_2 \cdot y_2} = 4.50000$

$\frac{x \cdot y}{2 \cdot 2} = 4.50000$

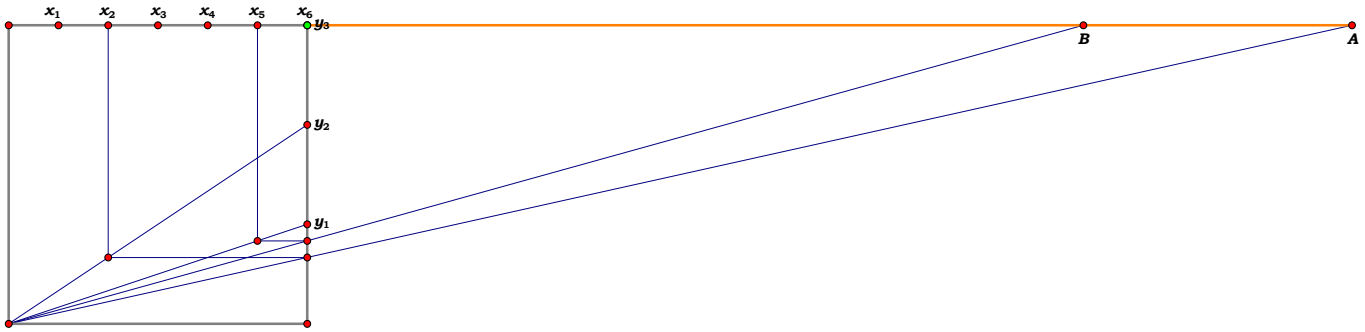
$\frac{6 \cdot 3}{2 \cdot 2} = 4.50000$

$B = 3.60000$

$\frac{1}{x_5 \cdot y_1} = 3.60000$

$\frac{x \cdot y}{5 \cdot 1} = 3.60000$

$\frac{18}{5} = 3.60000$



$Unit = 1.00000$

1x $x = 1.00000$

2x $y = 10.00000$

3x $x_1 = 1.00000$

4x $y_1 = 0.10000$

5x $y_2 = 0.20000$

6x $y_3 = 0.30000$

7x $y_4 = 0.40000$

8x $y_5 = 0.50000$

9x $y_6 = 0.60000$

10x $y_7 = 0.70000$

1y $y_8 = 0.80000$

2y $y_9 = 0.90000$

3y $\frac{1}{x_1 \cdot y_1} = 10.00000$

4y

5y

6y

7y $a = 0.01667$

8y $b = 0.03333$

9y $c = 0.05000$

10y $d = 0.06667$

$e = 0.08333$

$A = 0.16667$

$B = 0.33333$

$C = 0.50000$

$D = 0.66667$

$E = 0.83333$

$A = 0.16667$

$2 \cdot A = 0.33333$

$3 \cdot A = 0.50000$

$4 \cdot A = 0.66667$

$5 \cdot A = 0.83333$

$6 \cdot A = 1.00000$

$\frac{1}{a} = 60.00000$

$\frac{1}{b} = 30.00000$

$\frac{1}{c} = 20.00000$

$\frac{1}{d} = 15.00000$

$\frac{1}{e} = 12.00000$

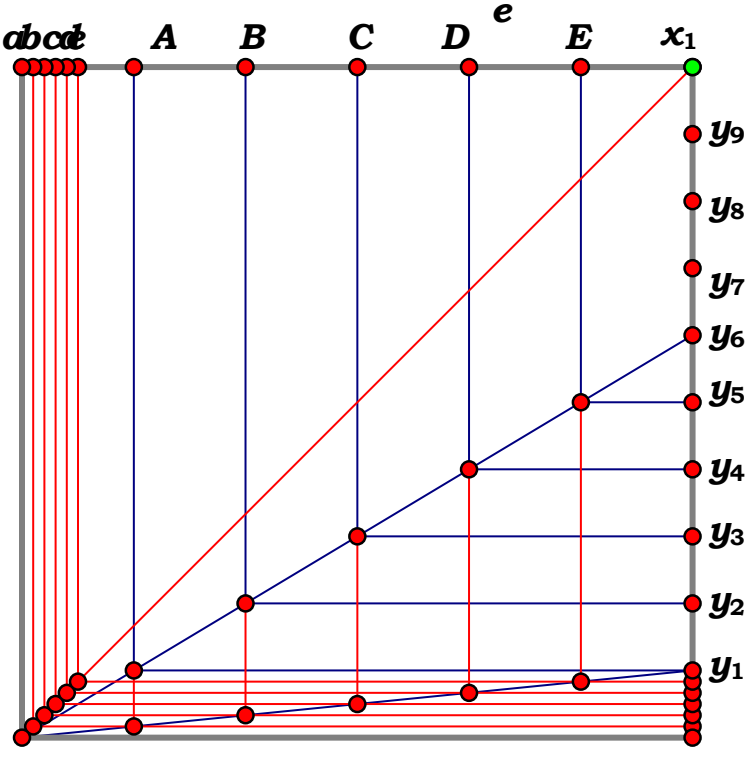
$a = 0.01667$

$2 \cdot a = 0.03333$

$3 \cdot a = 0.05000$

$4 \cdot a = 0.06667$

$5 \cdot a = 0.08333$



$Unit = 1.00000$

1x 2x 3x 4x 5x 6x 7x 8x 9x 10x 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y

$x = 10.00000$
$y = 10.00000$
$x_1 = 0.10000$
$x_2 = 0.20000$
$x_3 = 0.30000$
$x_4 = 0.40000$
$x_5 = 0.50000$
$x_6 = 0.60000$
$x_7 = 0.70000$
$x_8 = 0.80000$
$x_9 = 0.90000$

$y_1 = 0.10000$
$y_2 = 0.20000$
$y_3 = 0.30000$
$y_4 = 0.40000$
$y_5 = 0.50000$
$y_6 = 0.60000$
$y_7 = 0.70000$
$y_8 = 0.80000$
$y_9 = 0.90000$

$\frac{1}{x_1 \cdot y_1} = 100.00000$

$x_4 = 4.76190$

$\frac{1}{x_7 \cdot y_3} = 4.76190$

$\frac{x \cdot y}{7 \cdot 3} = 4.76190$

$\frac{100}{7 \cdot 3} = 4.76190$

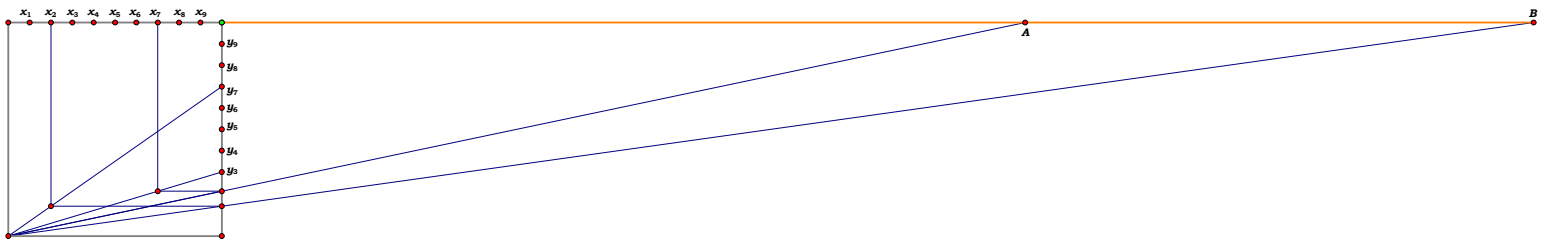
$B = 7.14286$

$\frac{1}{x_2 \cdot y_7} = 7.14286$

$\frac{x \cdot y}{2 \cdot 7} = 7.14286$

$\frac{100}{2 \cdot 7} = 7.14286$

Show Intersections



$Unit = 1.00000$

1x

2x $x = 6.00000$ $y_1 = 0.33333$

3x $y = 3.00000$ $y_2 = 0.66667$

4x $x_1 = 0.16667$ $y_3 = 1.00000$

5x $x_2 = 0.33333$

6x $x_3 = 0.50000$

7x $x_4 = 0.66667$

8x $x_5 = 0.83333$

9x $x_6 = 1.00000$

10x $\frac{1}{x_1 \cdot y_1} = 18.00000$

1y

2y

3y

4y $A = 4.50000$ $B = 3.60000$

5y $\frac{1}{x_2 \cdot y_2} = 4.50000$ $\frac{1}{x_5 \cdot y_1} = 3.60000$

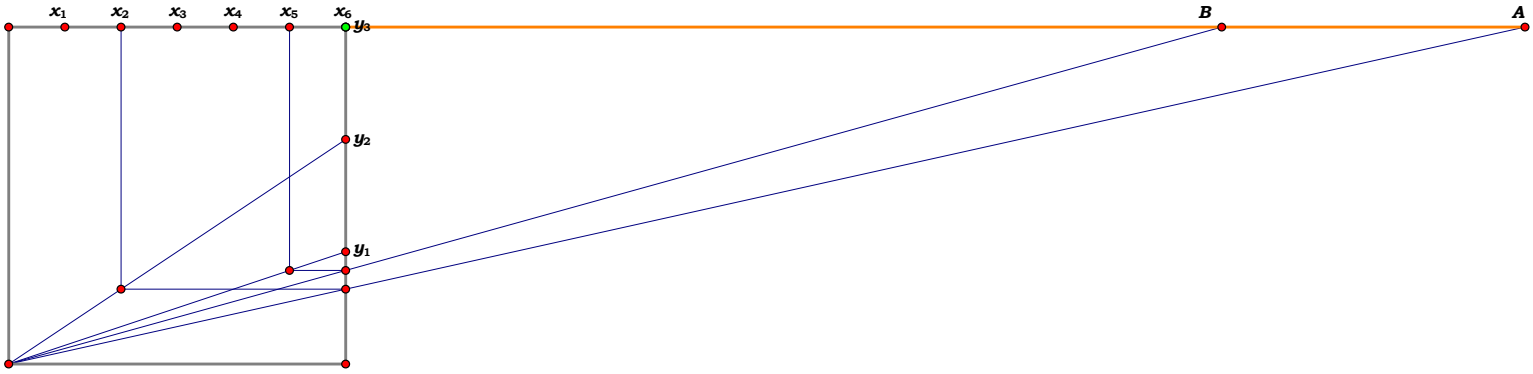
6y

7y $\frac{x \cdot y}{2 \cdot 2} = 4.50000$ $\frac{x \cdot y}{5 \cdot 1} = 3.60000$

8y

9y $\frac{6 \cdot 3}{2 \cdot 2} = 4.50000$ $\frac{18}{5} = 3.60000$

10y



$Unit = 1.00000$

1x 2x 3x 4x 5x 6x 7x 8x 9x 10x 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y Show Intersection y_1

$x = 8.00000$
$y = 7.00000$
$x_1 = 0.12500$
$x_2 = 0.25000$
$x_3 = 0.37500$
$x_4 = 0.50000$
$x_5 = 0.62500$
$x_6 = 0.75000$
$x_7 = 0.87500$
$x_8 = 1.00000$

$y_1 = 0.14286$
$y_2 = 0.28571$
$y_3 = 0.42857$
$y_4 = 0.57143$
$y_5 = 0.71429$
$y_6 = 0.85714$

$\frac{1}{x_1 \cdot y_1} = 56.00000$

$A = 1.86667$

$\frac{1}{x_6 \cdot y_5} = 1.86667$

$\frac{x \cdot y}{6 \cdot 5} = 1.86667$

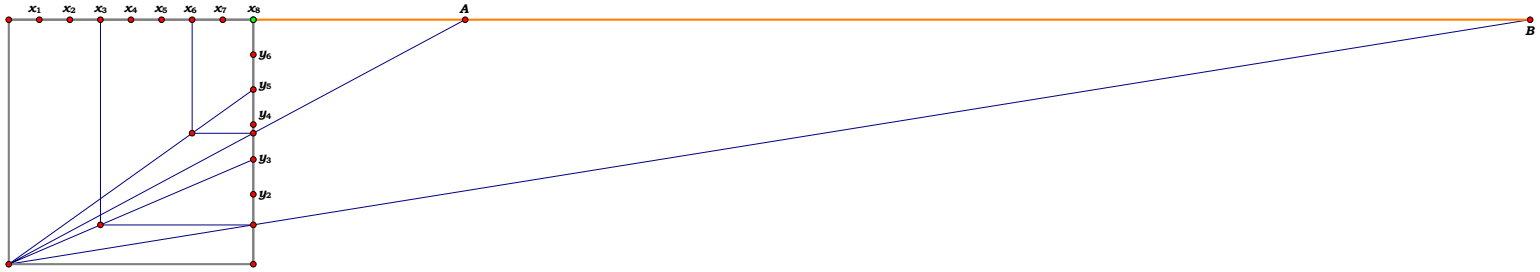
$\frac{56}{6 \cdot 5} = 1.86667$

$B = 6.22222$

$\frac{1}{x_3 \cdot y_3} = 6.22222$

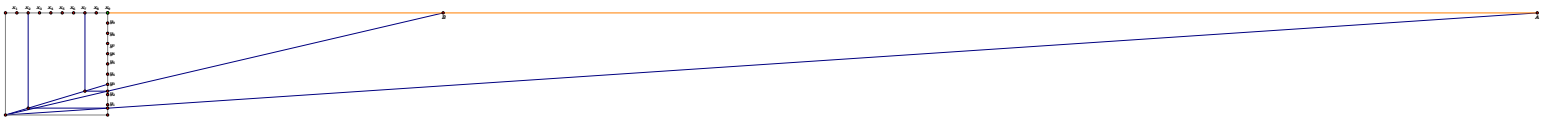
$\frac{x \cdot y}{3 \cdot 3} = 6.22222$

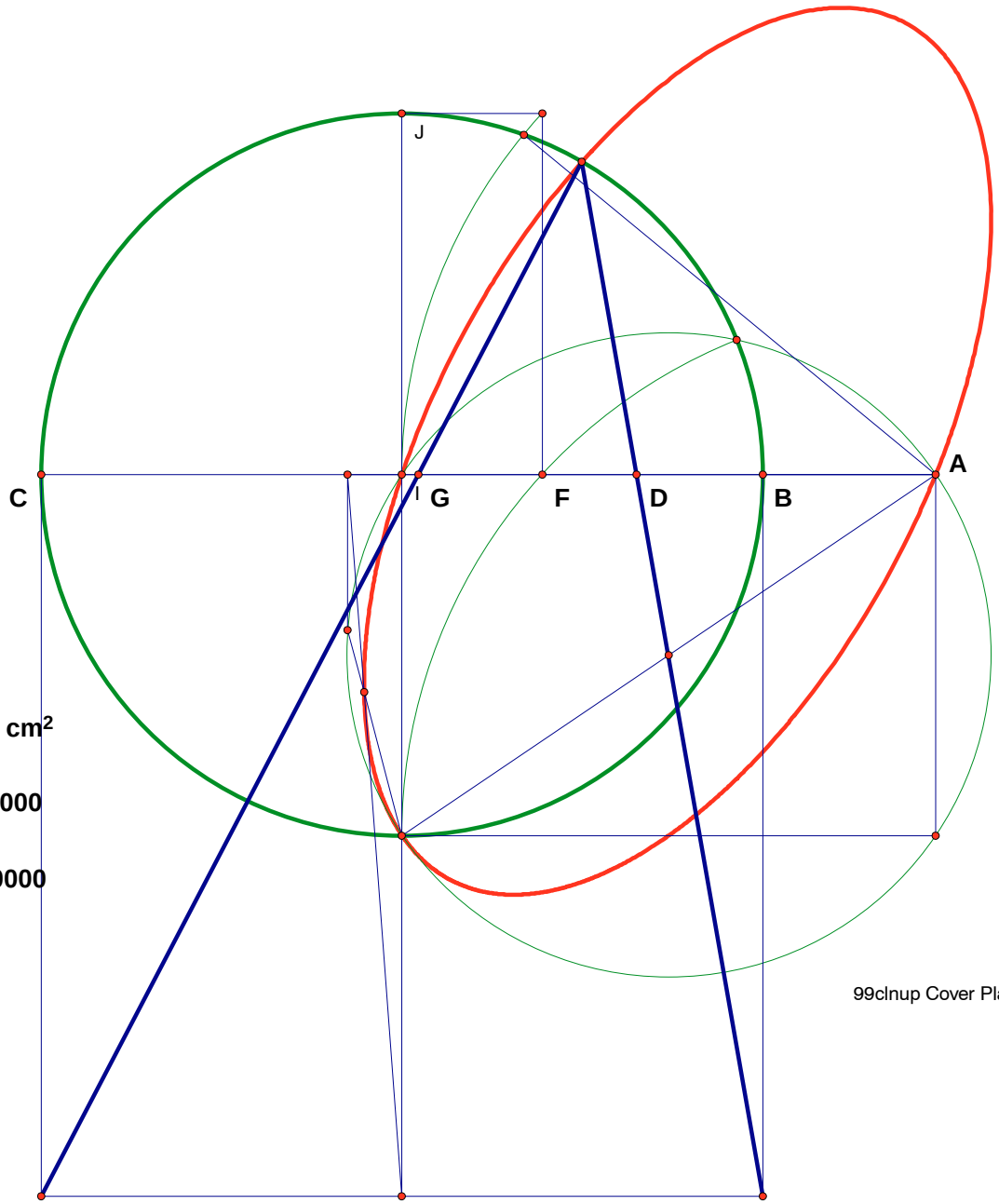
$\frac{56}{9} = 6.22222$



Unit = 1.00000

01	$x = 9.00000$	$\mu_1 = 0.10000$	
02	$p = 10.00000$	$\mu_2 = 0.20000$	
03	$x_1 = 0.11111$	$\mu_3 = 0.30000$	
04	$x_2 = 0.22222$	$\mu_4 = 0.40000$	
05	$x_3 = 0.33333$	$\mu_5 = 0.50000$	
06	$x_4 = 0.44444$	$\mu_6 = 0.60000$	
07	$x_5 = 0.55556$	$\mu_7 = 0.70000$	
08	$x_6 = 0.66667$	$\mu_8 = 0.80000$	
09	$x_7 = 0.77778$	$\mu_9 = 0.90000$	
10	$x_8 = 0.88889$		
11	$x_9 = 1.00000$	$\frac{1}{x_1 \cdot \mu_1} = 90.00000$	
12			
13	$A = 15.00000$	$B = 4.28571$	
14	$\frac{1}{x_7 \cdot \mu_7} = 15.00000$	$\frac{1}{x_7 \cdot \mu_7} = 4.28571$	
15	$\frac{7 \cdot 6}{2 \cdot 3} = 15.00000$	$\frac{7 \cdot 6}{7 \cdot 3} = 4.28571$	
16	$\frac{63}{6} = 10.50000$	$\frac{63}{21} = 3.00000$	



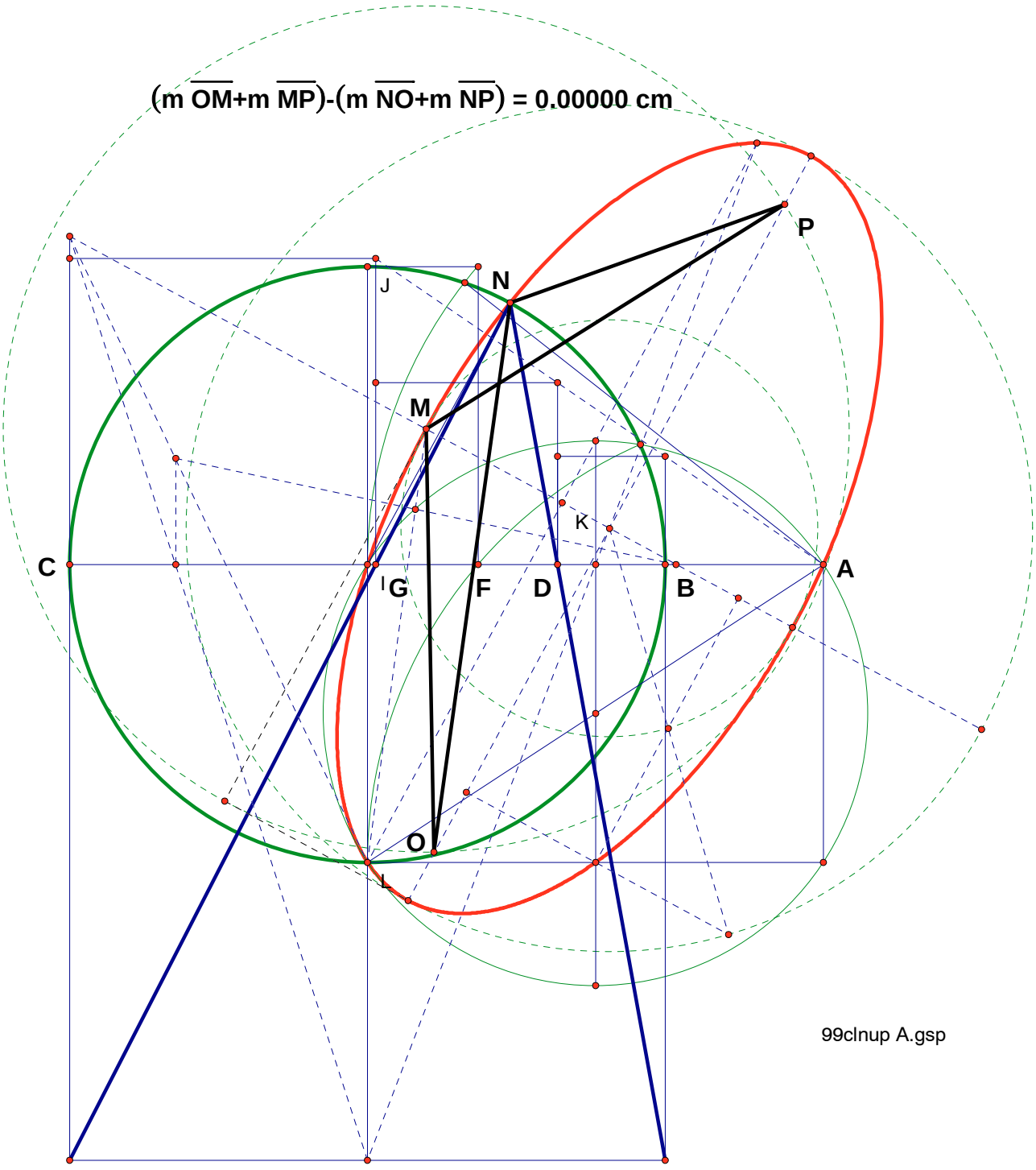


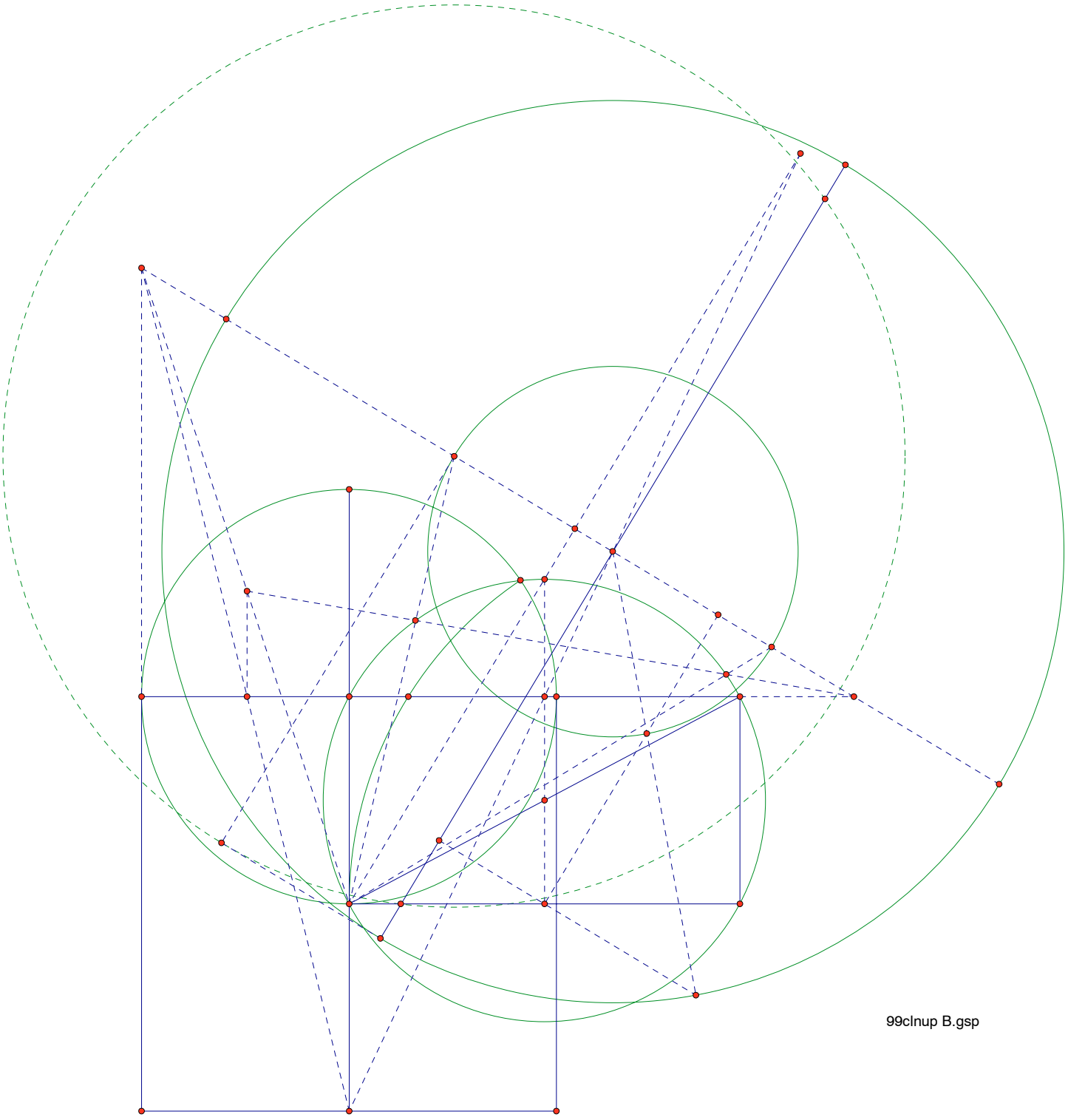
$AB \cdot AC - AF^2 = 0.00000\ cm^2$

$(AB^2 \cdot AC)^{\frac{1}{3}} - AD = 0.00000$

$(AB \cdot AC^2)^{\frac{1}{3}} - AG = 0.00000$

99clnup Cover Plate.gsp


(m OM+m MP)-(m NO+m NP) = 0.00000 cm
P
N
J
M
K
C
I
G
F
D
B
A
O
L
99clnup A.gsp


99clnup B.gsp

m $\overline{OM}$ = 8.53290 cm

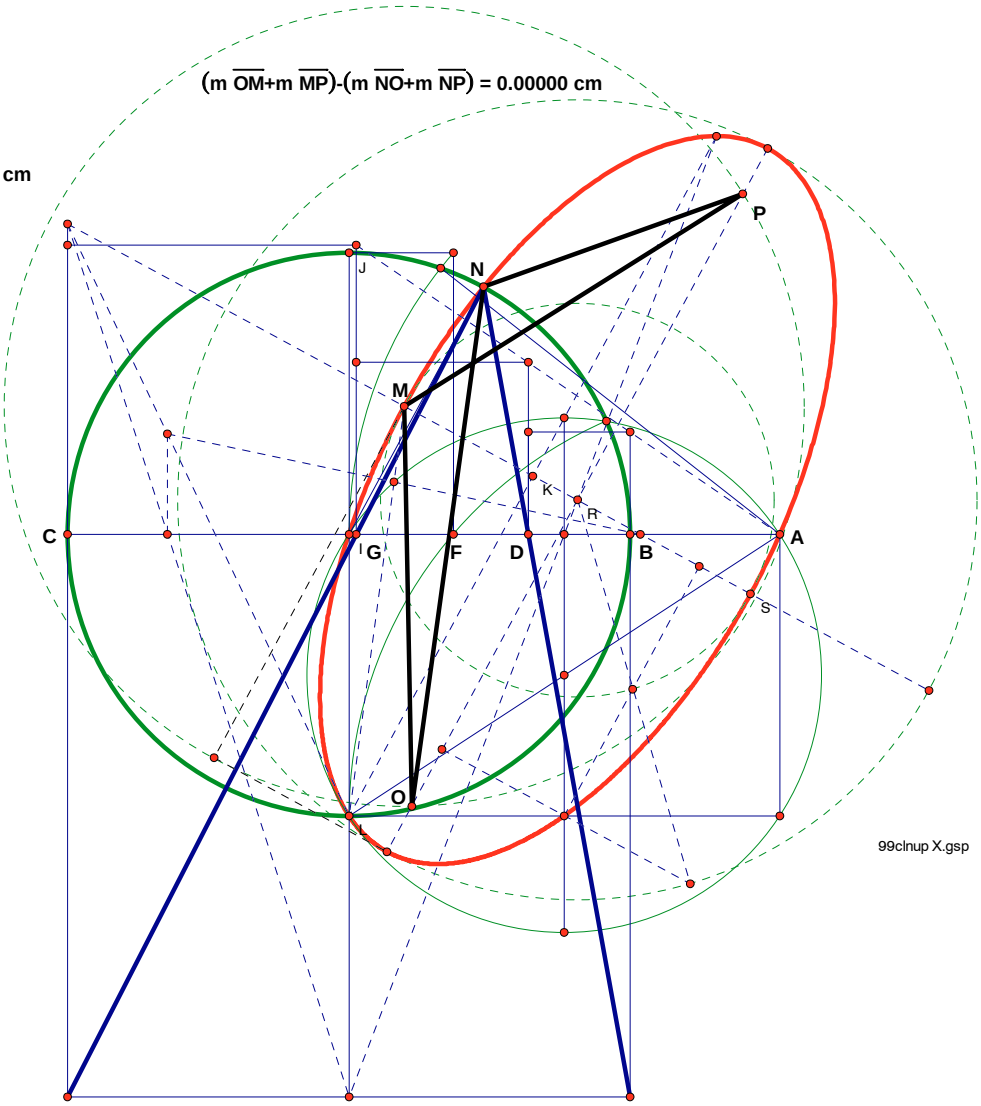
m $\overline{MP}$ = 8.53290 cm

m $\overline{NO}$ = 11.18126 cm

m $\overline{NP}$ = 5.88454 cm

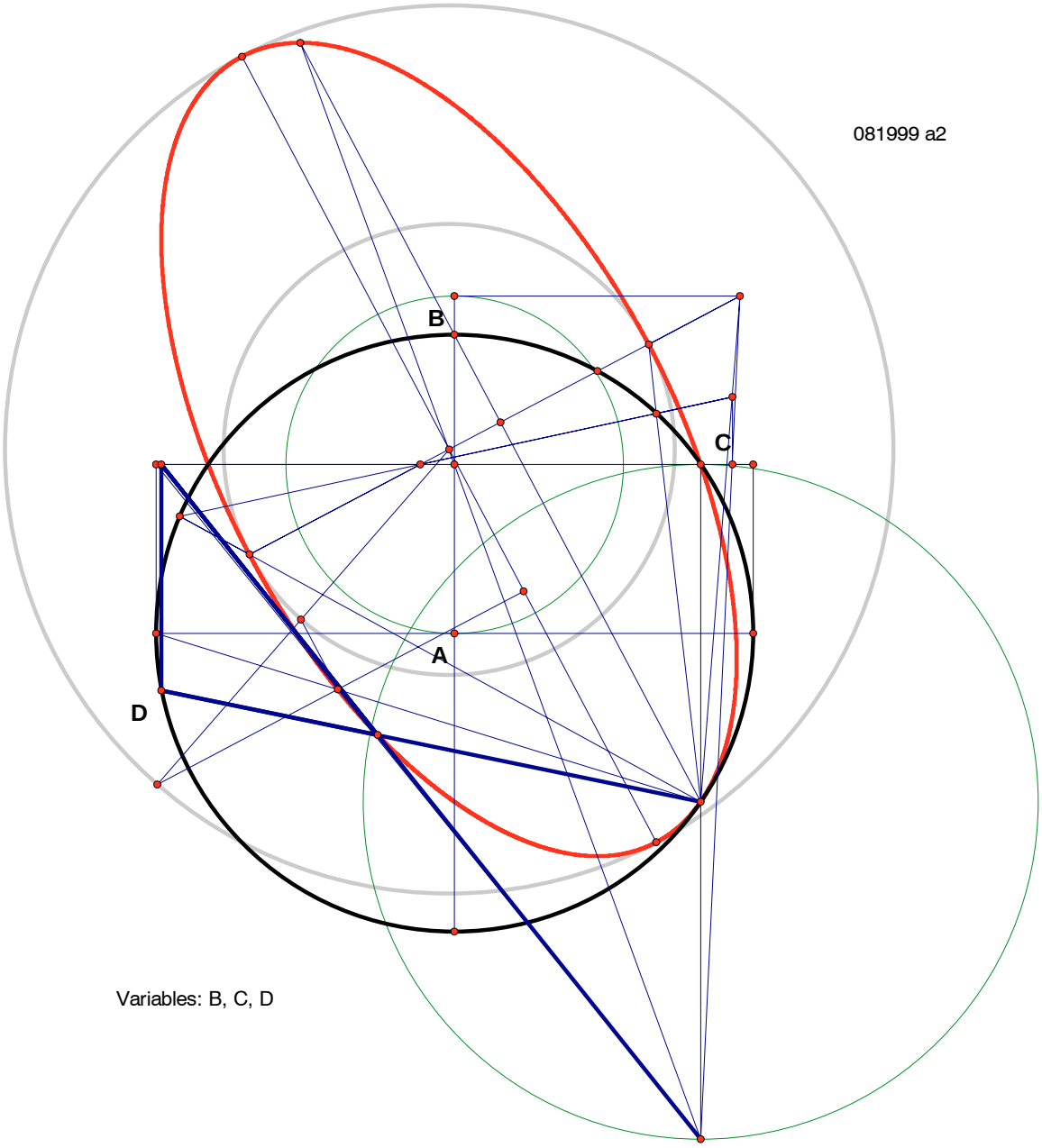
RS = 4.20290 cm

$(m\ \overline{OM}+m\ \overline{MP})-(m\ \overline{NO}+m\ \overline{NP})$ = 0.00000 cm

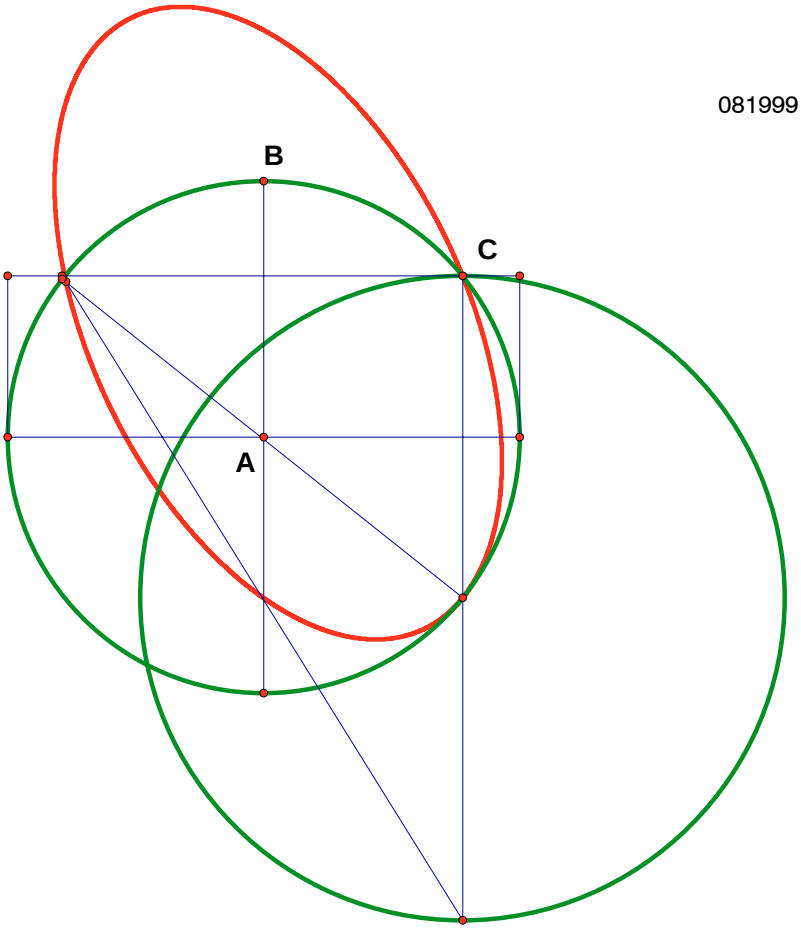


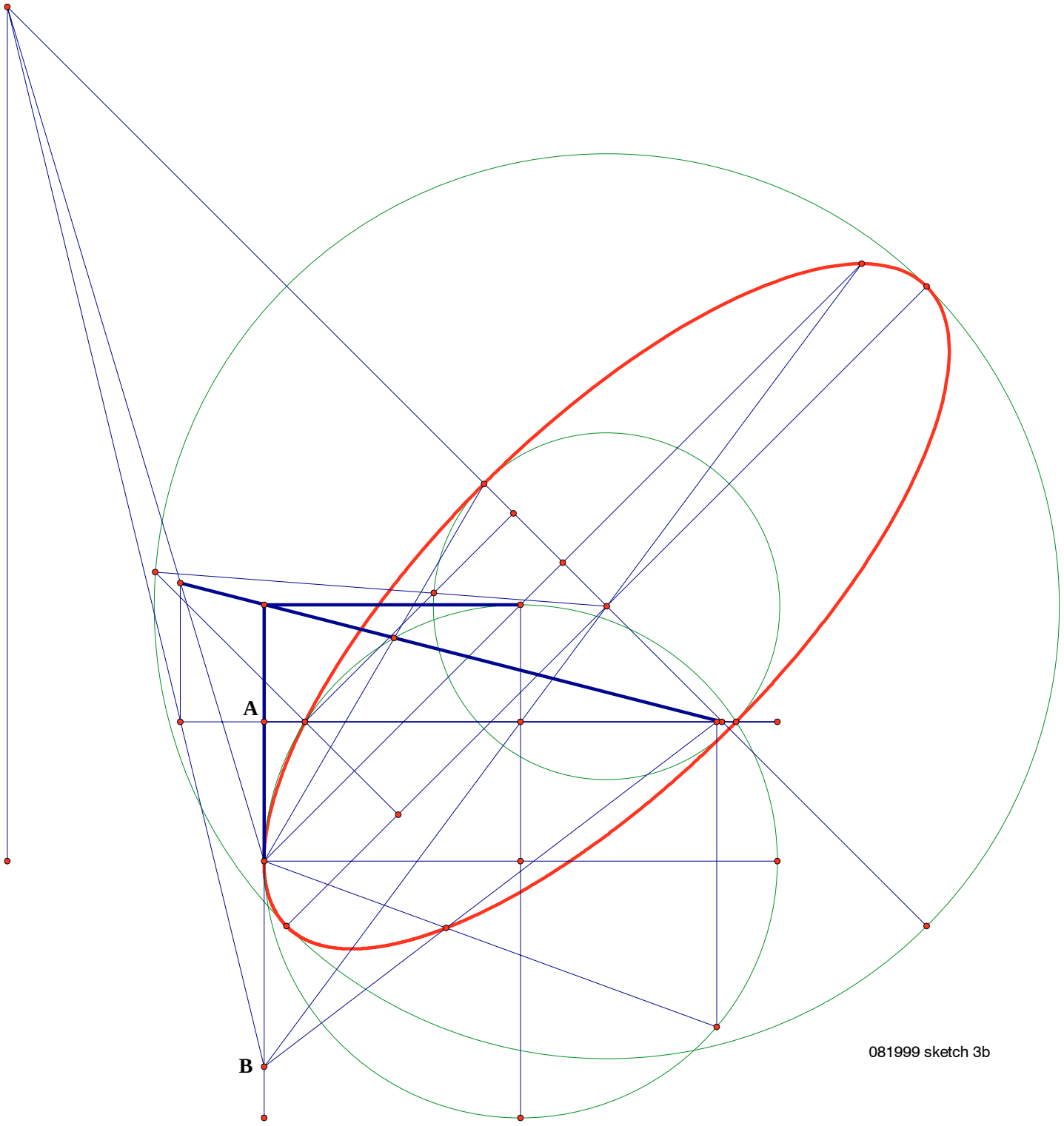
99clnup X.gsp

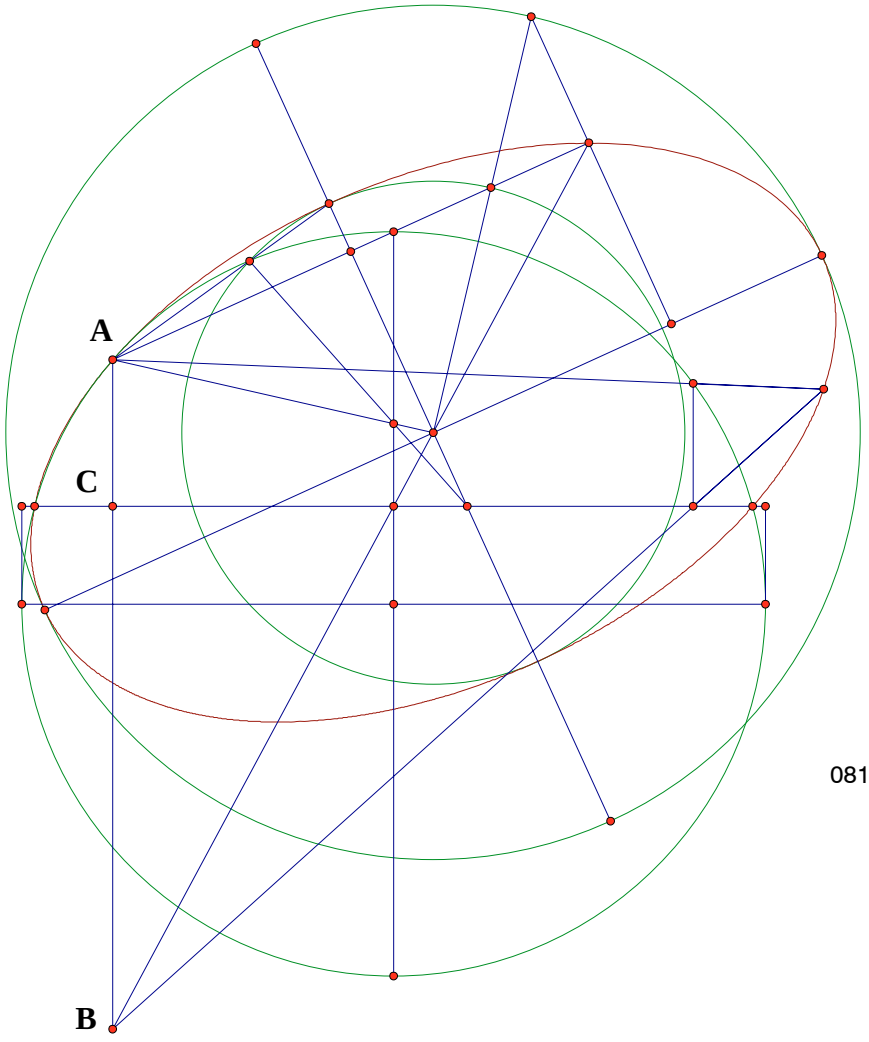
Animate Point



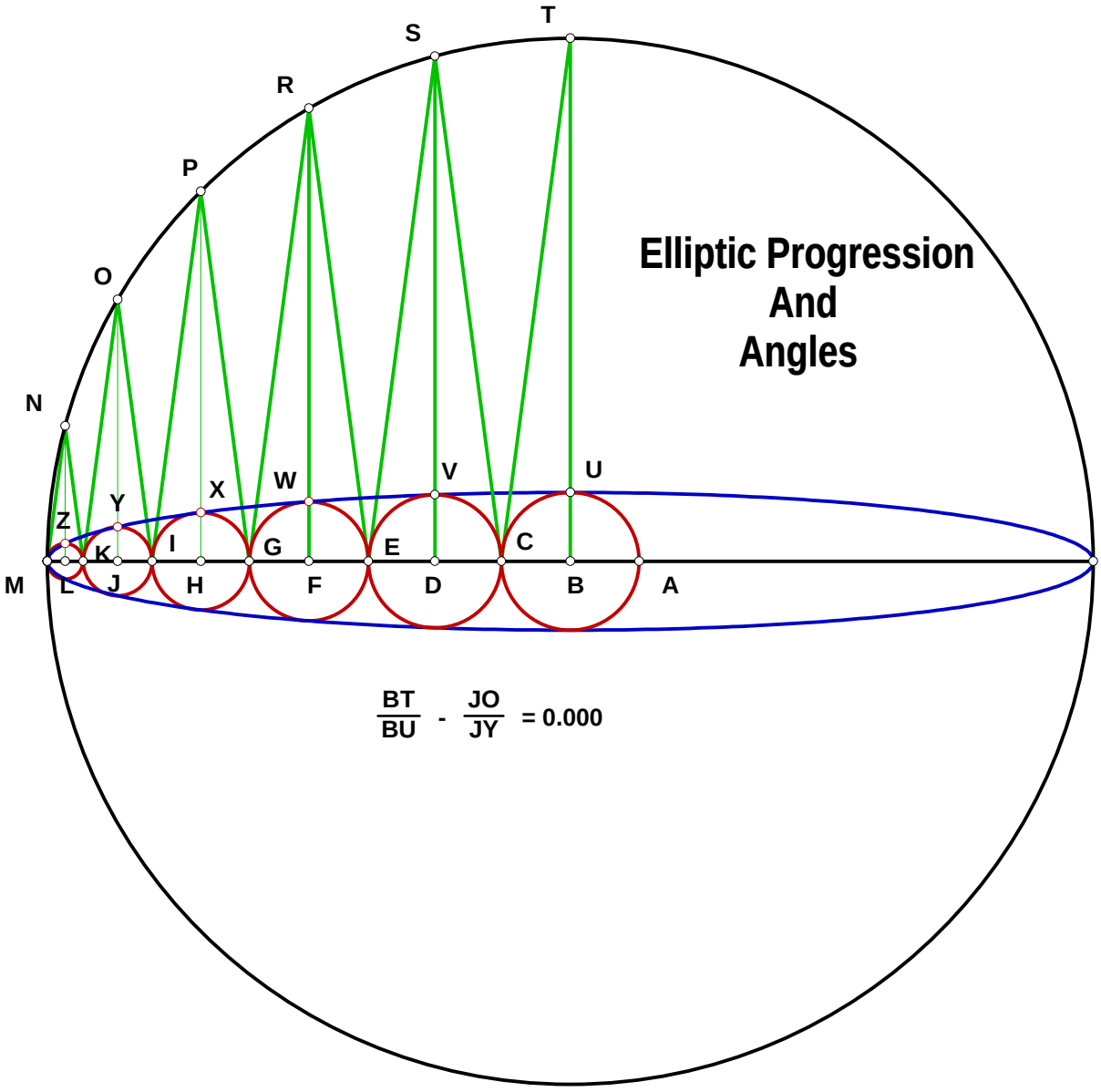
Variables: B, C, D

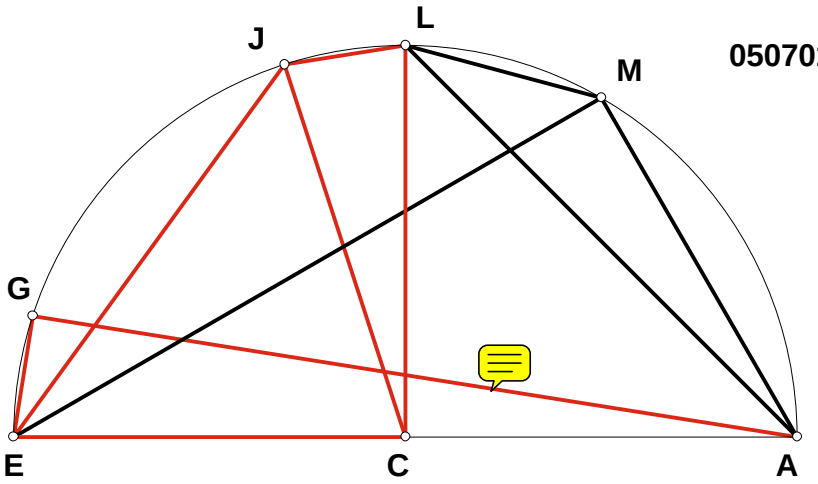

081999 a1
B
C
A


A
B
081999 sketch 3b



081999b


T
S
R
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A
Z
Y
X
W
V
U
Elliptic Progression
And
Angles
BT/BU - JO/JY = 0.000



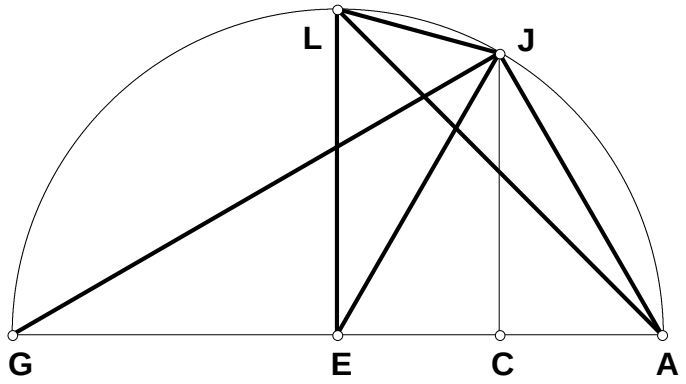
050701 Segment Map

$$EM := \frac{1}{2}\cdot\sqrt{3} \qquad AL := \frac{1}{2}\cdot\sqrt{2} \qquad JL := \frac{1}{4}\cdot\sqrt{8 - 2\cdot\sqrt{10 + 2\cdot\sqrt{5}}} \qquad LM := \frac{1}{4}\cdot\sqrt{6} - \frac{1}{4}\cdot\sqrt{2}$$

$$AM := \frac{1}{2} \qquad EJ := \frac{1}{4}\cdot\sqrt{10 - 2\cdot\sqrt{5}}$$

$$AG := \frac{1}{4}\cdot\sqrt{8 + 2\cdot\sqrt{10 + 2\cdot\sqrt{5}}}$$

Outtake Four: Some Names 0507014



$AG := 1 \quad AE := \frac{AG}{2} \quad AC := \frac{AE}{2}$

$CG := AG - AC \quad CJ := \sqrt{AC \cdot CG}$

$EL := AE \quad CE := AC$

$JL := \sqrt{EL^2 - 2 \cdot EL \cdot CJ + CJ^2 + CE^2}$

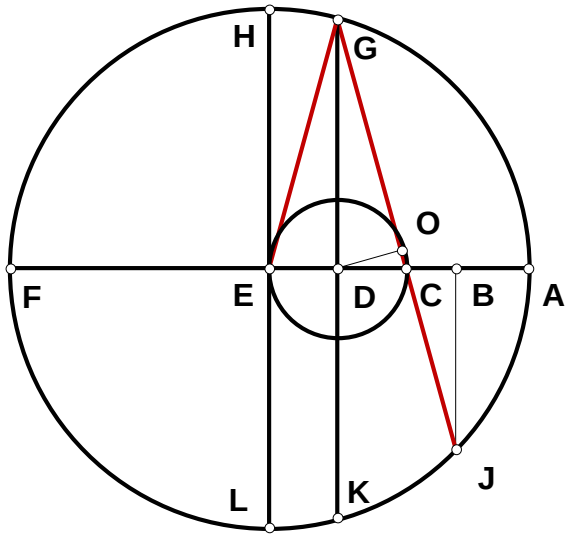
$AJ := \sqrt{AC^2 + CJ^2} \quad GJ := \sqrt{CG^2 + CJ^2}$

$AL := \sqrt{AE^2 + EL^2}$

$AE := \frac{1}{2} \quad AC := \frac{1}{4} \quad CG := 1 - \frac{1}{4} \quad CJ := \frac{1}{4} \cdot \sqrt{3} \quad JL := \frac{1}{4} \cdot \sqrt{6} - \frac{1}{4} \cdot \sqrt{2}$

$AJ := \frac{1}{2} \quad GJ := \frac{1}{2} \cdot \sqrt{3}_{*} \quad AL := \frac{1}{2} \cdot \sqrt{2}$

Elliptic Progression Outtake One 0507011



A method of trisection Algebraically.

$N := M$

$N \geq 4 = 1$ $\quad AF := 6$ $\quad AE := \frac{AF}{2}$

$DE := \frac{AF}{N}$ $\quad AD := AE - DE$ $\quad DF := AF - AD$

$DG := \sqrt{AD \cdot DF}$ $\quad CD := DE$ $\quad EG := AE$

$CO := \frac{CD^2}{EG}$ $\quad CG := EG$ $\quad CJ := CG - 4 \cdot CO$

$BC := \frac{CD \cdot CJ}{CG}$ $\quad AB := AE - (2 \cdot DE + BC)$

$BJ := \frac{DG \cdot BC}{CD}$ $\quad BD := BC + CD$

$JK := \sqrt{DG^2 - 2 \cdot DG \cdot BJ + BJ^2 + BD^2}$ $\quad \frac{JK}{2 \cdot DE} = 1$ **Some Algebraic Names,**

Part of this demonstration may be something of a reductio ad absurdum, if one supposed that CJ were not true. I suppose I need a plate to demonstrate it.

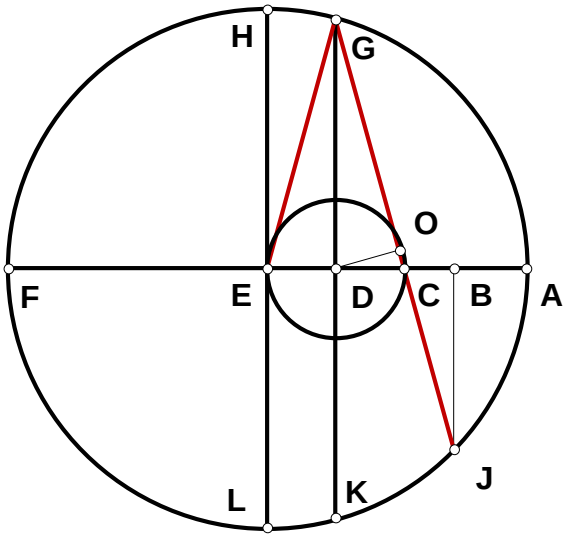
$AF \cdot \frac{(N-2)}{2 \cdot N} - AD = 0$ $\quad AF \cdot \frac{(N+2)}{2 \cdot N} - DF = 0$ $\quad AF \cdot \frac{\sqrt{(N-2) \cdot (N+2)}}{2 \cdot N} - DG = 0$

$\frac{2\ AF}{N^2} - CO = 0$ $\quad AF \cdot \frac{(N-4) \cdot (N+4)}{2 \cdot N^2} - CJ = 0$ $\quad AF \cdot \frac{(N-4) \cdot (N+4)}{N^3} - BC = 0$

$AF \cdot \frac{(N+2) \cdot (N-4)^2}{2 \cdot N^3} - AB = 0$ **One of the meanings of trisection is solving for the following equation when given AF and AB.**

$$\frac{AF}{AB} - \frac{2 \cdot N^3}{(N+2) \cdot (N-4)^2} = 0$$

$AF \cdot \frac{(N-4) \cdot (N+4) \cdot \sqrt{(N-2) \cdot (N+2)}}{2 \cdot N^3} - BJ = 0$ $\quad AF \cdot \frac{2 \cdot (N^2 - 8)}{N^3} - BD = 0$ $\quad \frac{2 \cdot AF}{N} - JK = 0$



$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} - \frac{AF}{AB} = 0 \qquad \frac{AF}{AB} = 6$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} - 6 = 0$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} = 6$$

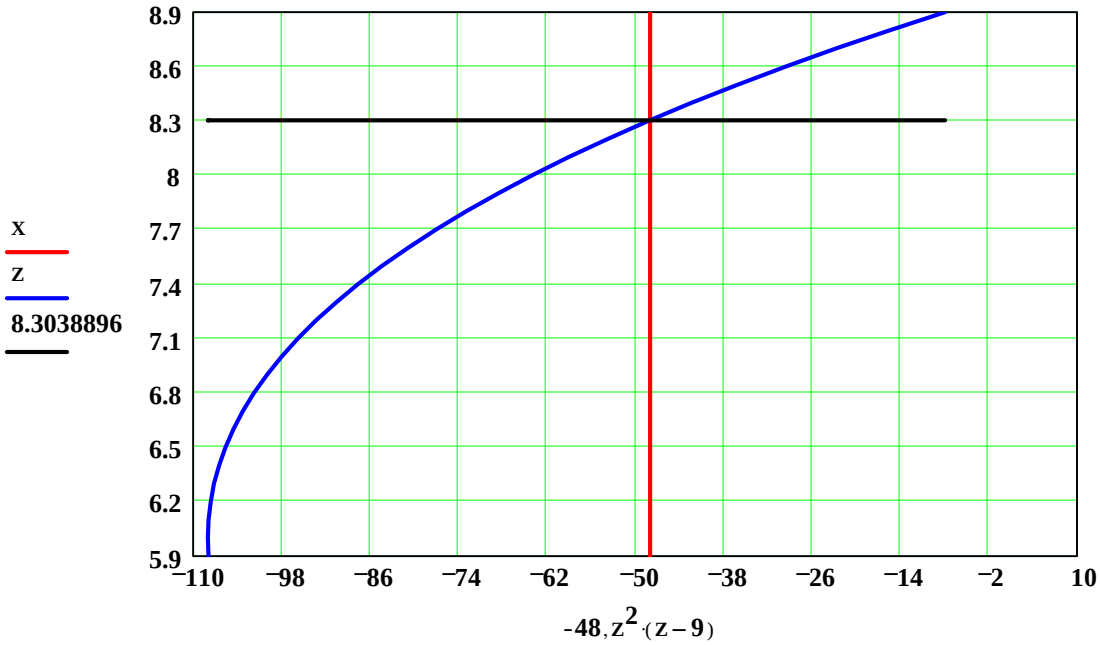
$$2\cdot M^3 - 6\cdot\left[(M+2)\cdot(M-4)^2\right] = 0$$

$$2\cdot M^3 - \left(6\cdot M^3 - 36\cdot M^2 + 192\right) = 0$$

$$4\cdot M^3 - 36\cdot M^2 + 192 = 0$$

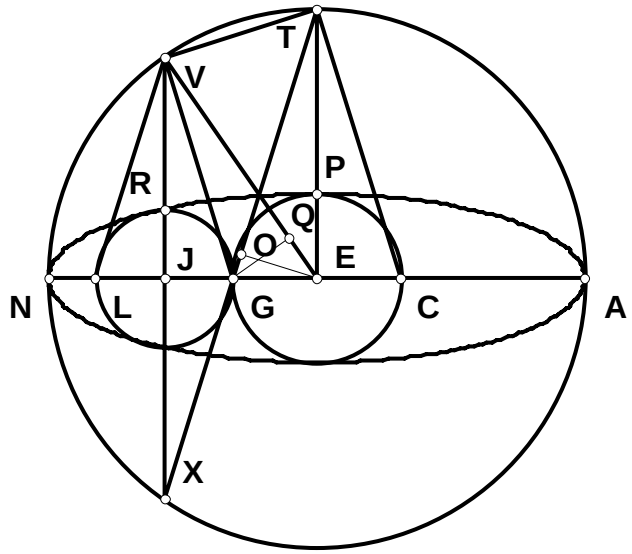
$$M^3 - 9\cdot M^2 + 48 = 0 \qquad M^2\cdot(M-9) + 48 = 0 \qquad M \equiv 8.303889634816388$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} = 6 \qquad DE - \frac{AF}{M} = 0 \qquad Z := 5.9, 6 .. 8.9$$



Elliptic Progression Outtake Two 0507012

Angles TEV and EVJ equals CTG.



$N := 6.381 \quad AN := 2.792$

$EN := \frac{AN}{2} \quad ET := EN \quad EV := EN$

$EG := \frac{AN}{N} \quad EP := EG \quad GT := \sqrt{EG^2 + ET^2}$

$GO := \frac{EG^2}{GT} \quad GX := GT - 2 \cdot GO$

$JX := \frac{ET \cdot GX}{GT} \quad GJ := \frac{EG \cdot GX}{GT}$

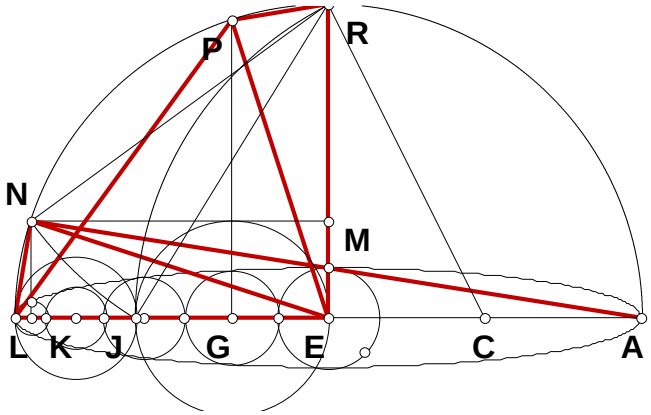
$\frac{ET}{EP} - \frac{JX}{GJ} = 0 \qquad JV := JX$

$EJ := EG + GJ$

$TV := \sqrt{ET^2 - 2 \cdot ET \cdot JV + JV^2 + EJ^2}$

$\frac{ET}{TV} - \frac{GT}{2 \cdot EG} = 0 \qquad EQ := \frac{EJ \cdot EG}{EV} \quad GQ := \frac{JV \cdot EQ}{EJ} \quad GQ - GJ = 0$

Outtake Three: Alternate Method: Pentasection Or Irrational Rationals 0507013



$AL := 1 \qquad AE := \frac{AL}{2} \qquad AC := \frac{AE}{2}$

$CE := AC \quad ER := AE \quad CR := \sqrt{CE^2 + ER^2}$

$CJ := CR \qquad EJ := CJ - CE$

$JR := \sqrt{EJ^2 + ER^2} \quad NR := JR$

$EN := AE \quad EM := \frac{EN^2 + ER^2 - NR^2}{2 \cdot ER}$

$KN := EM \quad EK := \sqrt{EN^2 - KN^2} \quad EL := AE \qquad KL := EL - EK \qquad LN := \sqrt{KL^2 + KN^2}$

$EG := \frac{EJ}{2} \qquad GL := EL - EG \quad AG := AE + EG \qquad GP := \sqrt{AG \cdot GL} \qquad PR := \sqrt{ER^2 - 2 \cdot ER \cdot GP + GP^2 + EG^2}$

$PR - LN = 0 \qquad AN := \sqrt{AL^2 - LN^2}$

Irrational **means the inability of a grammar to provide a name for a given thing. Many things are then irrational in Arithmetic due to the principles of the naming convention. Algebraic naming solves the problem by incorporating operands as part of a name. Algebra provides a degree of rationality then that is not achievable by Arithmetic. The following are some Algebraic names.**

$\frac{1}{2} - AE = 0 \qquad \frac{1}{4} - AC = 0 \qquad \frac{1}{4} \cdot \sqrt{5} - CR = 0 \qquad \frac{1}{4} \cdot \sqrt{5} - \frac{1}{4} - EJ = 0 \qquad \frac{1}{4} \cdot \sqrt{10 - 2 \cdot \sqrt{5}} - JR = 0$

$\frac{-1}{8} + \frac{1}{8} \cdot \sqrt{5} - EM = 0 \qquad \frac{1}{2} \cdot \sqrt{\frac{5}{8} + \frac{1}{8} \cdot \sqrt{5}} - EK = 0 \qquad \frac{1}{2} - \frac{1}{8} \cdot \sqrt{10 + 2 \cdot \sqrt{5}} - KL = 0$

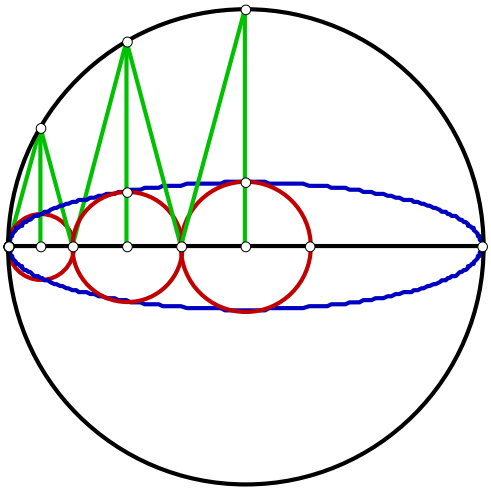
$\frac{1}{4} \cdot \sqrt{8 - 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - LN = 0 \qquad \frac{-1}{8} + \frac{1}{8} \cdot \sqrt{5} - EG = 0 \qquad \frac{5}{8} - \frac{1}{8} \cdot \sqrt{5} - GL = 0$

$\frac{3}{8} + \frac{1}{8} \cdot \sqrt{5} - AG = 0 \qquad \frac{1}{8} \cdot \sqrt{10 + 2 \cdot \sqrt{5}} - GP = 0 \qquad \frac{1}{4} \cdot \sqrt{8 - 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - PR = 0$

$\frac{1}{4} \cdot \sqrt{8 + 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - AN = 0$

Elliptic Progression

050701

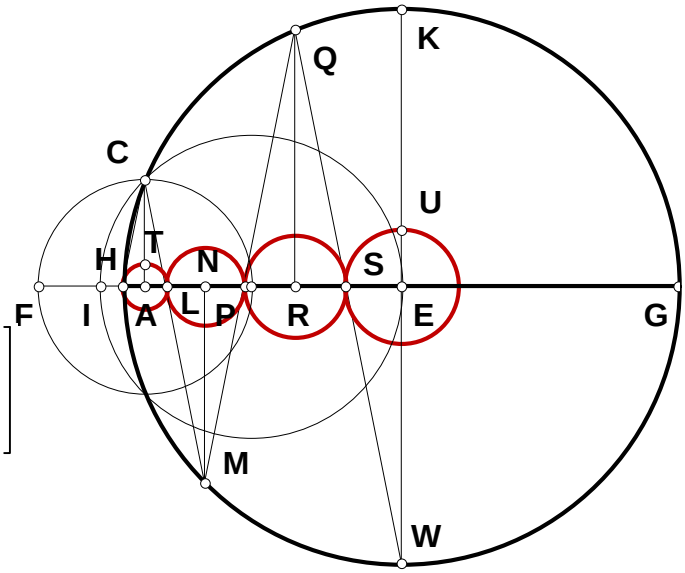


An Elliptic Progression takes place on a finite length of line. An Elliptic Progression may be defined in terms of a number of diameters of smaller circles, each defined by the same angle from the circumferance of the larger circle, from the center of a circle to its perimeter. When the sum of the number of those diameters minus one half the starting diameter are equal to the radius of the larger circle, the angle that defined the smaller circles will divide the larger circle evenly and the same number of times as the total number of smaller circles. This means that the division of a circle into equal angles is based on a simple elliptic funciton.

$\Delta := 2 \qquad N := 0 .. \Delta$

$AC_0 := .552 \qquad CP_0 := \sqrt{2 \left(AC_0\right)^2}$

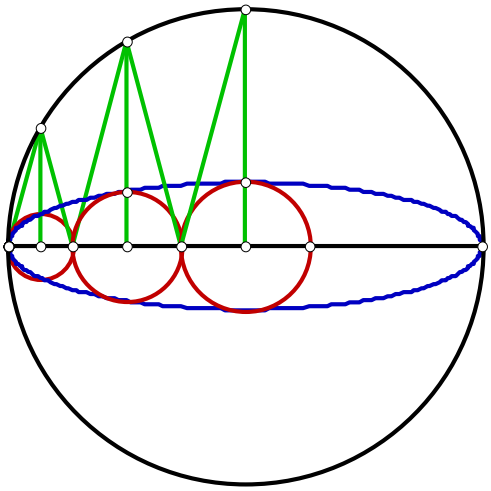
$$\begin{bmatrix} AC_{N+1} \\ CP_{N+1} \end{bmatrix} := \begin{bmatrix} CP_N \\ \sqrt{\left(AC_0\right)^2 + \left[\left(AC_N + CP\right)_N\right]^2} \end{bmatrix}$$



$CE := AC_\Delta \qquad AE := \sqrt{CE^2 - \left(AC_0\right)^2}$

$EH := CE \quad EK := CE \quad AH := EH - AE \quad AT := AH \qquad EU := \frac{AH \cdot EK}{AC_0}$

$EU = 0.287$



Angles and the Ellipse 050801.mcd

$AC := 1 \qquad CP := \sqrt{2\ AC^2}$

$AP := AC \qquad EP := CP$

$CE := \sqrt{AC^2 + (AP + EP)^2}$

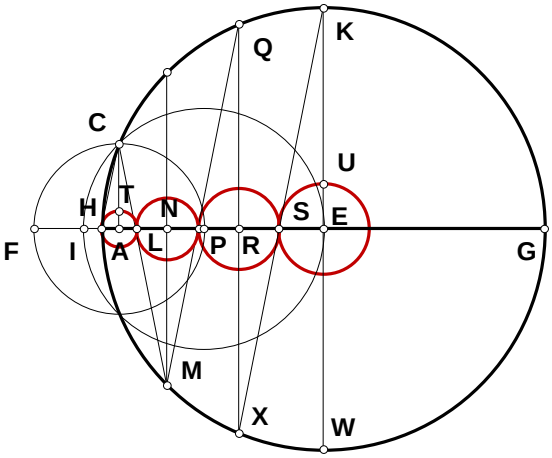
$EK := CE \quad EH := CE$

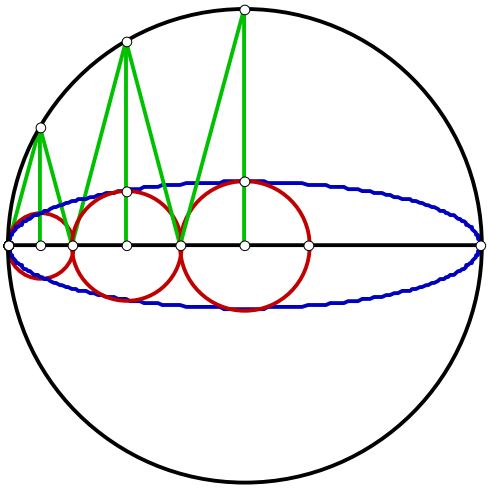
$AE := \sqrt{CE^2 - AC^2}$

$AH := EH - AE$

$AT := AH \qquad EU := \frac{AT \cdot EK}{AC}$

$\frac{EK}{EU} - \left(1 + \sqrt{2} + \sqrt{2} \cdot \sqrt{2 + \sqrt{2}}\right) = 0$

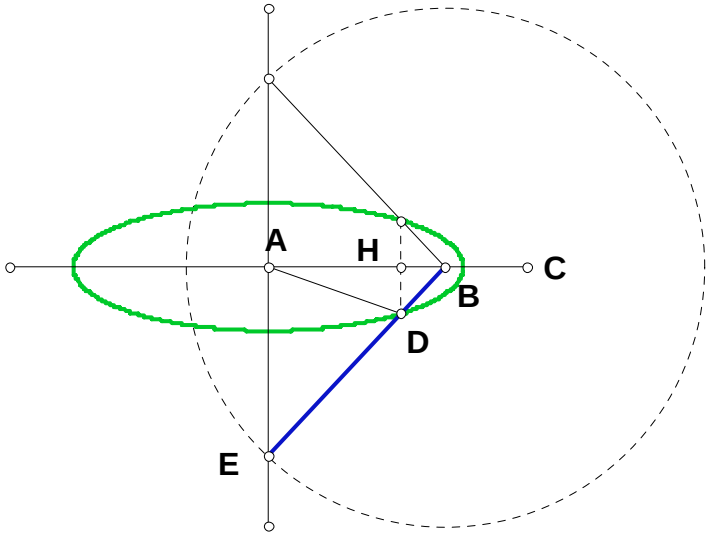




An Elliptic Progression takes place on a finite length of line. An Elliptic Progression may be defined in terms of a number of diameters of smaller circles, each defined by the same angle from the circumferance of the larger circle and from the center of a circle to its perimeter. When the sum of the number of those diameters minus one half the starting diameter are equal to the radius of the larger circle, the angle that defined the smaller circles will divide the larger circle evenly and the same number of times as the total number of smaller circles. This means that the division of a circle into equal angles may be expressed as an elliptic function.

Straight Line Ellipse

041904



Cardinal

$U := 1 \qquad R_1 := 3$

$R_2 := 2 \qquad AC := U$

$BE := AC \qquad BD := \frac{BE}{R_1}$

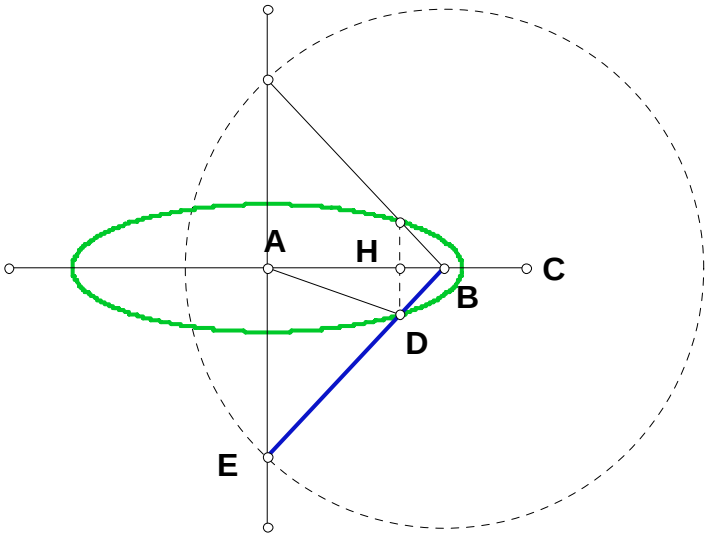
$AB := \frac{AC}{R_2} \qquad AE := \sqrt{BE^2 - AB^2}$

$BH := \frac{AB \cdot BD}{BE} \qquad DH := \frac{AE \cdot BD}{BE}$

$AH := AB - BH \qquad AD := \sqrt{AH^2 + DH^2}$

$AD := \frac{U}{(R_1 \cdot R_2)} \cdot \sqrt{(R_1)^2 - 2 \cdot R_1 + (R_2)^2} \qquad \frac{\sqrt{(R_1)^2 - 2 \cdot R_1 + (R_2)^2}}{R_1 \cdot R_2} - \frac{AD}{U} = 0$

Ordinal



$N_1 := 1.344 \qquad N_2 := .3$

$N_3 := .5$

$AC := N_1 \qquad BD := N_2$

$AB := N_3 \qquad AF := AC$

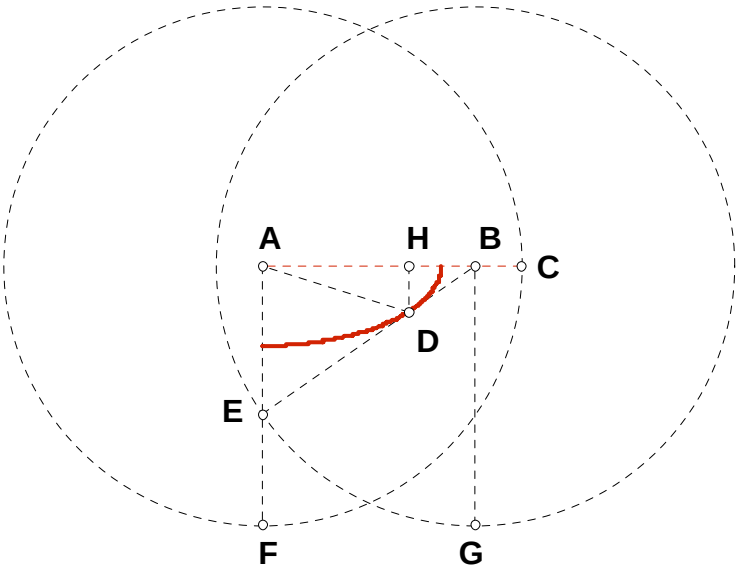
$BE := AC \qquad AE := \sqrt{BE^2 - AB^2}$

$BH := \frac{AB \cdot BD}{BE} \qquad DH := \frac{AE \cdot BD}{BE}$

$AH := AB - BH$

$AD := \sqrt{AH^2 + DH^2}$

$\sqrt{\frac{1}{N_1} \cdot \left[(N_3)^2 \cdot N_1 - 2 \cdot (N_3)^2 \cdot N_2 + (N_2)^2 \cdot N_1 \right]} - AD = 0$



Straight Line Ellipse

041904B

$N_1 := 1.344 \quad N_2 := .415$

$N_3 := 1.102$

$AC := N_1 \quad BD := N_2$

$AB := N_3 \quad AF := AC$

$BE := AC \quad AE := \sqrt{BE^2 - AB^2}$

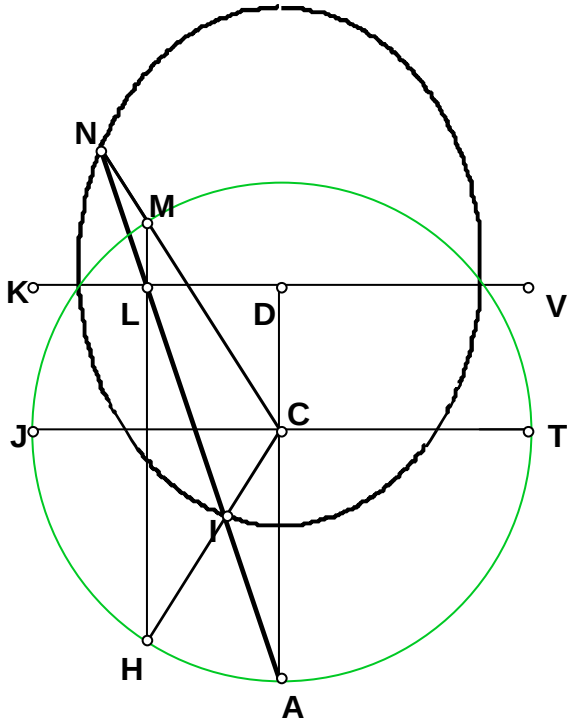
$BH := \frac{AB \cdot BD}{BE} \quad DH := \frac{AE \cdot BD}{BE}$

$AH := AB - BH$

$AD := \sqrt{AH^2 + DH^2}$

$$AD := \sqrt{\frac{1}{N_1} \cdot \left[(N_3)^2 \cdot N_1 - 2 \cdot (N_3)^2 \cdot N_2 + (N_2)^2 \cdot N_1 \right]}$$

Another Ellipse 031405a



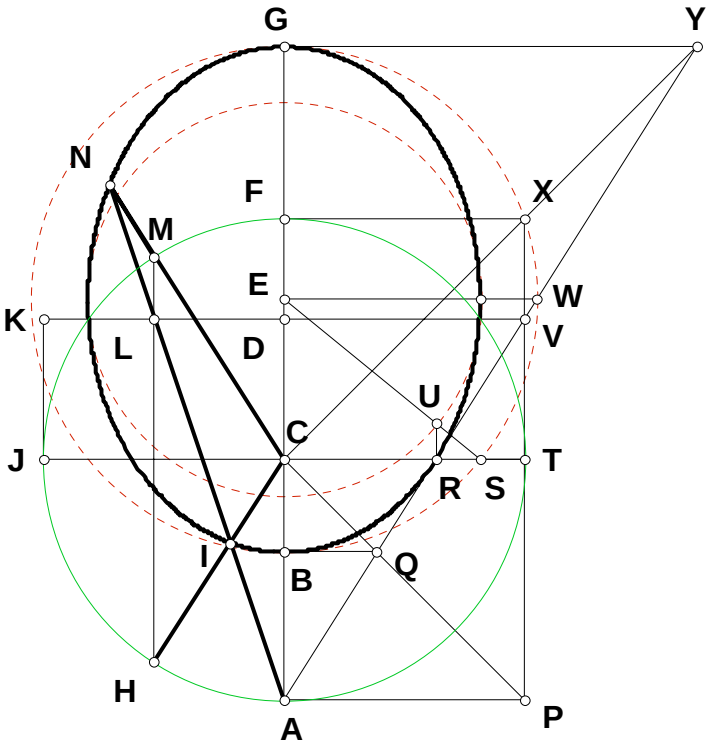
The locus formed by N and I as determined by L provides an ellipse. Privide an Algebraic name for the Major and Minor Axis.

$N_1 := 1.25 \qquad N_2 := 3$

$AC := N_1 \qquad AD := N_2$

$DV := AC \qquad AV := \sqrt{AD^2 + DV^2}$

$AF := 2 \cdot AC \qquad VX := AF - AD$



$$AY := \frac{AV \cdot AC}{AC - VX}$$

$$AG := \frac{AD \cdot AY}{AV}$$

$$BC := \frac{AC \cdot AC}{AC + AD}$$

$CG := AG - AC$

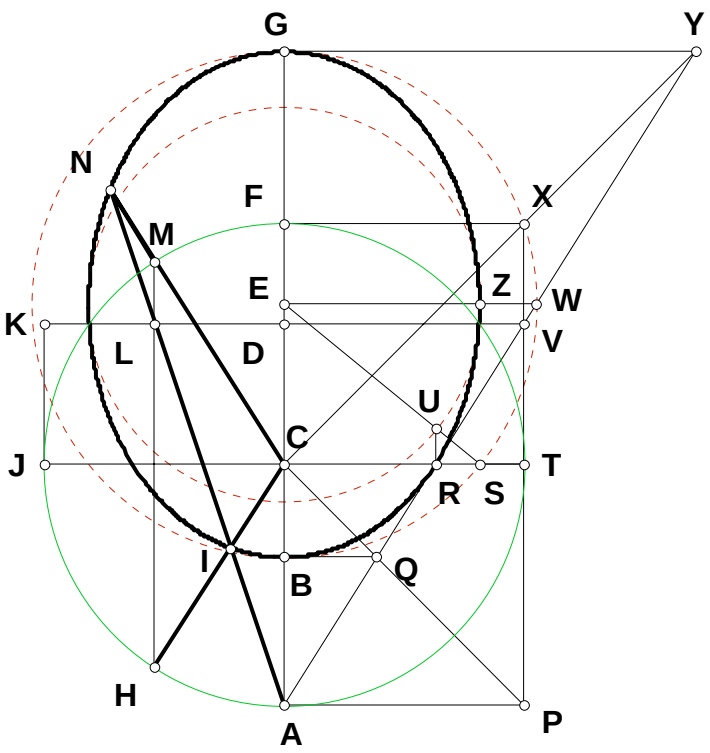
$BG := BC + CG$

$$BE := \frac{BG}{2}$$

$CE := BE - BC \qquad ES := BE$

$$CS := \sqrt{ES^2 - CE^2}$$

$$CR := \frac{DV \cdot AC}{AD}$$



$$EU := \frac{ES \cdot CR}{CS}$$

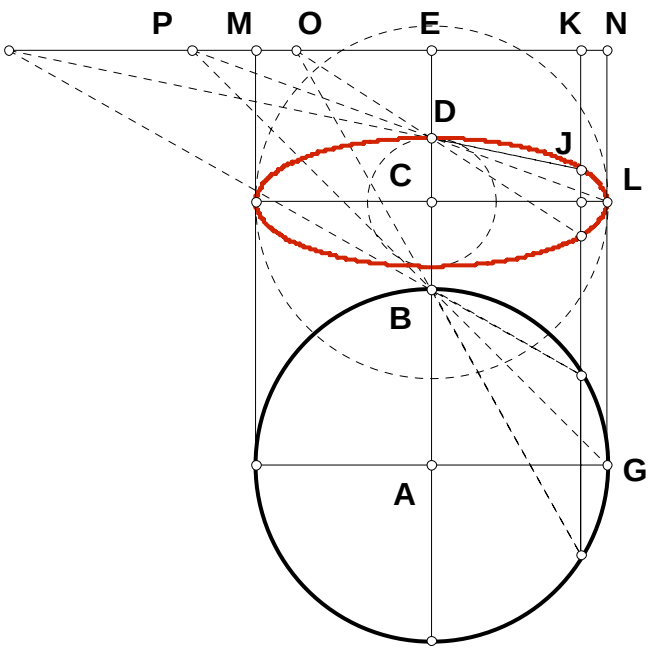
$$EZ := EU$$

$$EZ - \frac{N_1^2 \cdot \sqrt{N_2^2 - N_1^2}}{(N_1 + N_2) \cdot (N_2 - N_1)} = 0$$

$$BG - \frac{2 \cdot N_1^2 \cdot N_2}{(N_1 + N_2) \cdot (N_2 - N_1)} = 0$$

An Ellipse

032305a



$N_1 := 1 \qquad N_2 := 2$

$N_3 := .5$

$AB := N_1 \qquad MN := 2 \cdot AB$

$BE := N_2 \qquad BD := N_3$

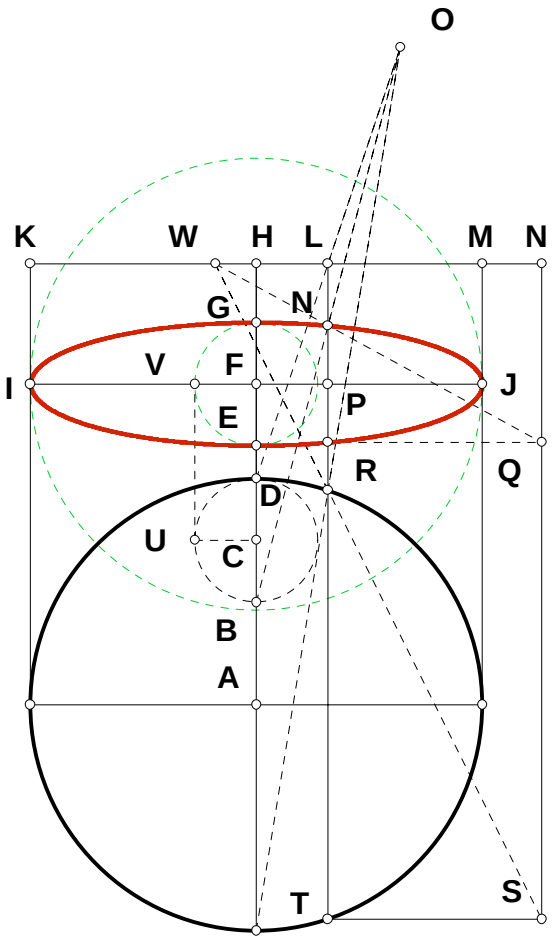
$DE := BE - BD \qquad AG := AB$

$EP := \frac{AG \cdot BE}{AB} \qquad EN := AB$

$NL := \frac{DE \cdot (EP + EN)}{EP}$

$CE := NL \qquad CD := CE - DE$

$N_1 \cdot \frac{(N_2 - N_3)}{N_2} - CD = 0$


O
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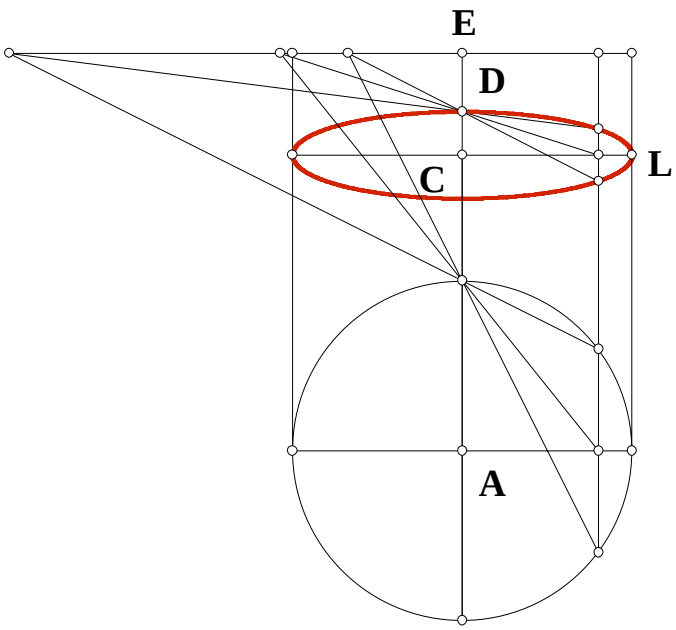


AE = 2.069 inches

CE = 0.529 inches

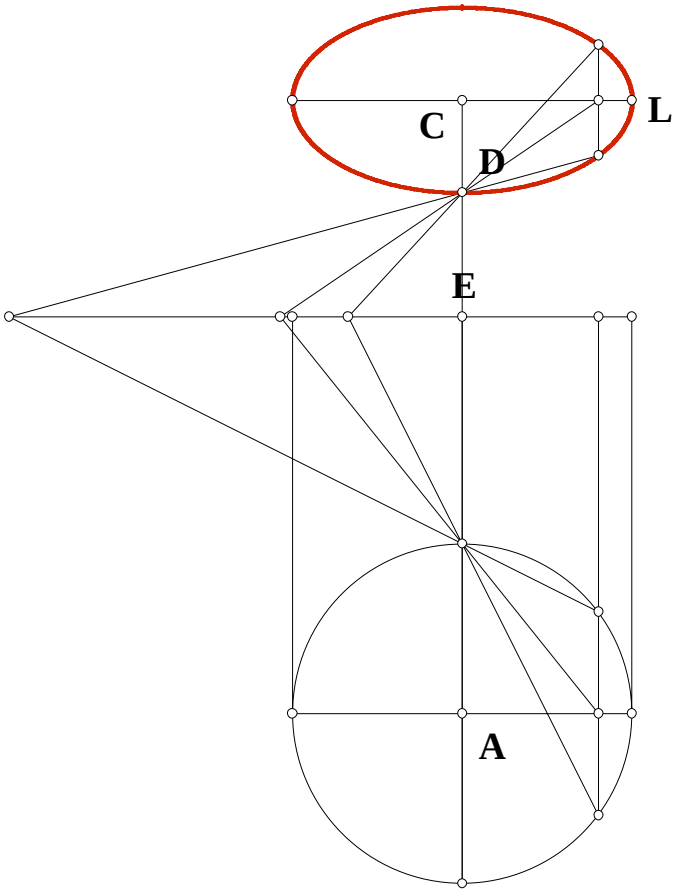
LC = 0.885 inches

CD = 0.227 inches

$$\frac{AE}{CE} = 3.909$$

$$\frac{LC}{CD} = 3.909$$

$$\frac{AE}{CE} - \frac{LC}{CD} = 0.000$$



AE = 2.069 inches

CE = 1.128 inches

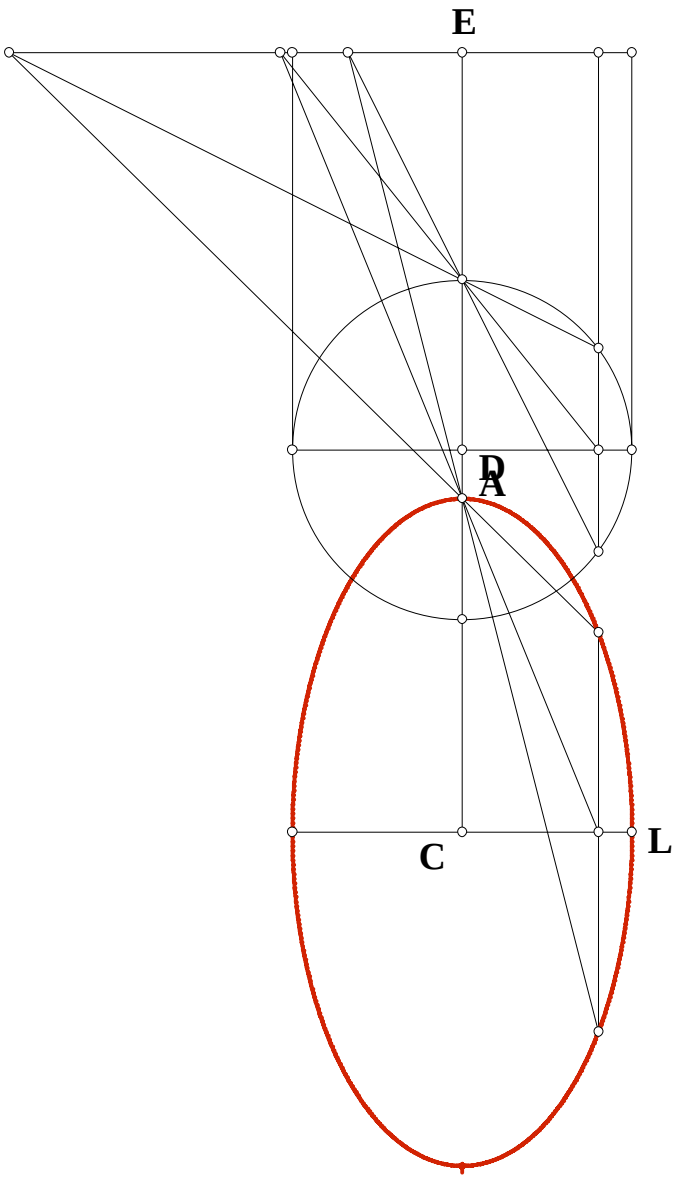
LC = 0.885 inches

CD = 0.483 inches

$$\frac{AE}{CE} = 1.834$$

$$\frac{LC}{CD} = 1.834$$

$$\frac{AE}{CE} - \frac{LC}{CD} = 0.000$$



AE = 2.069 inches

CE = 4.062 inches

LC = 0.885 inches

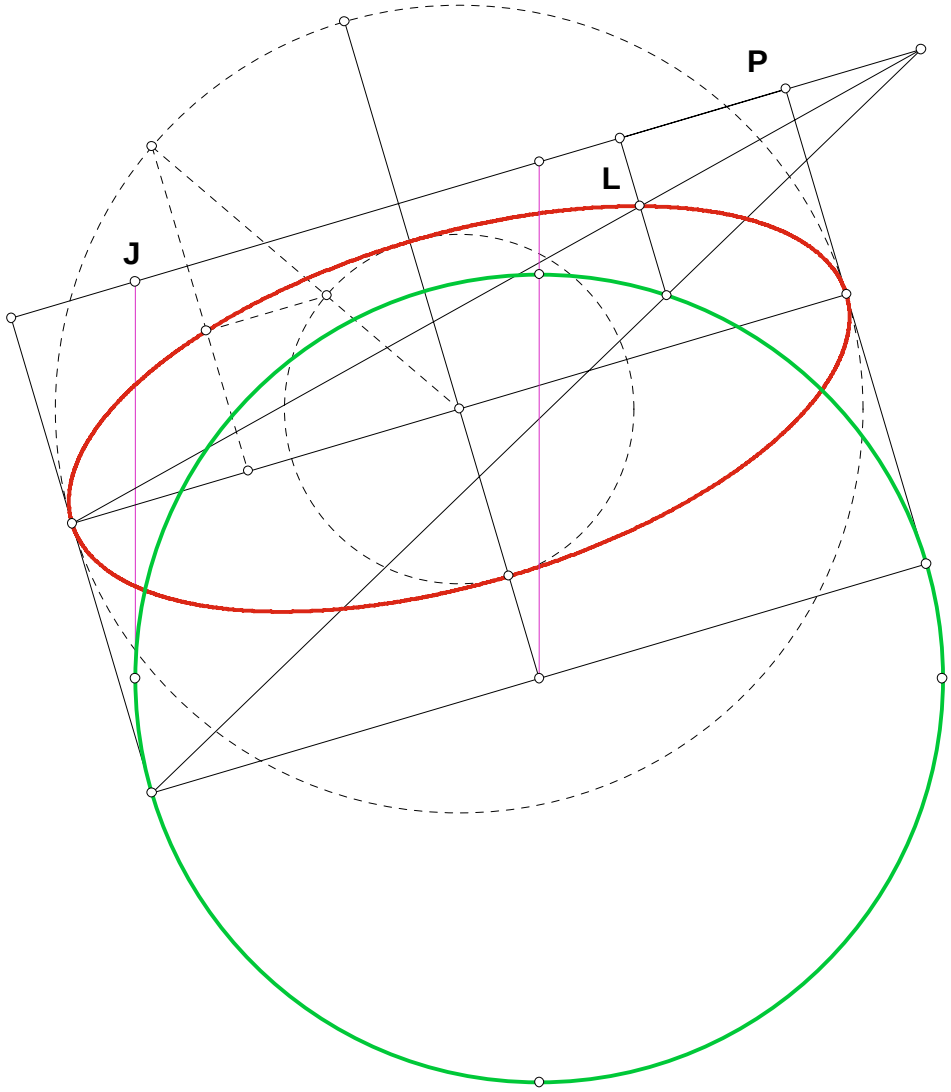
CD = 1.739 inches

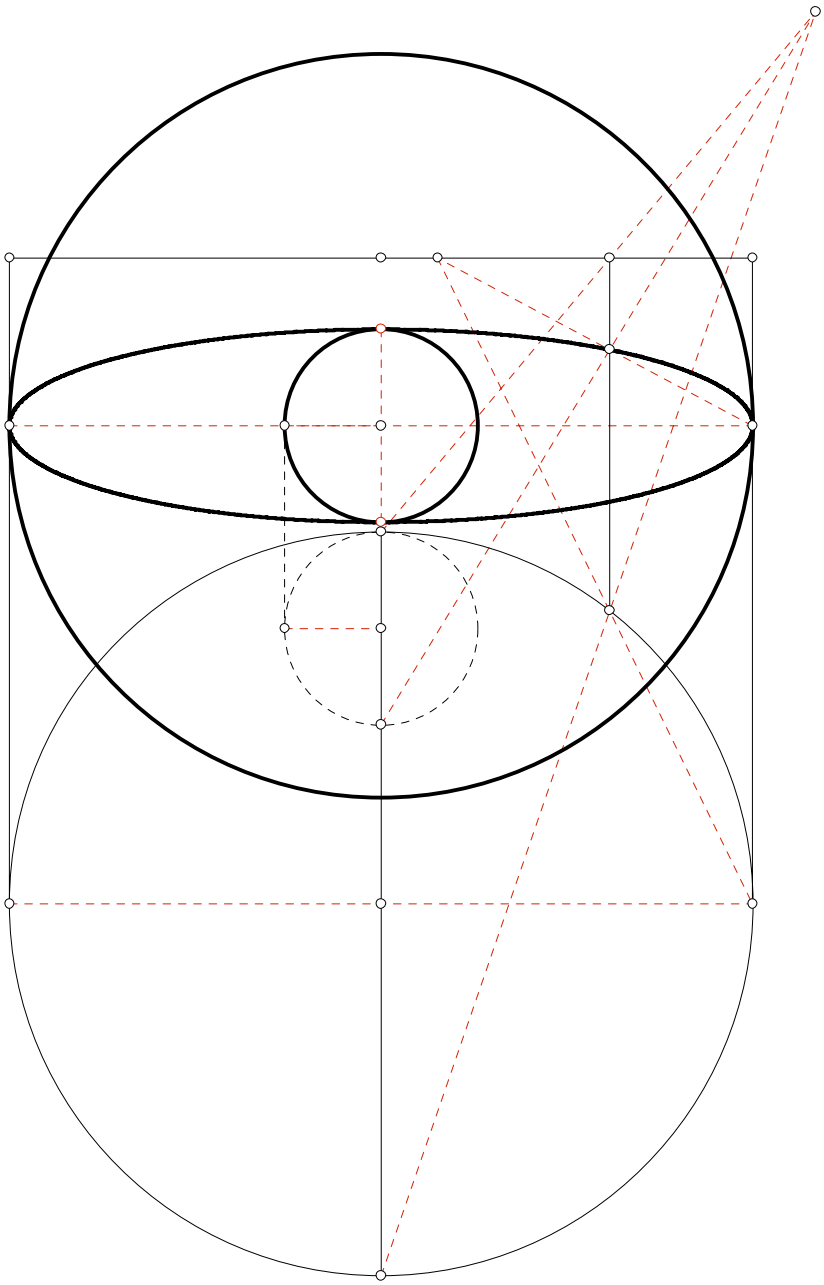
$\frac{AE}{CE} = 0.509$

$\frac{LC}{CD} = 0.509$

$\frac{AE}{CE} - \frac{LC}{CD} = 0.000$

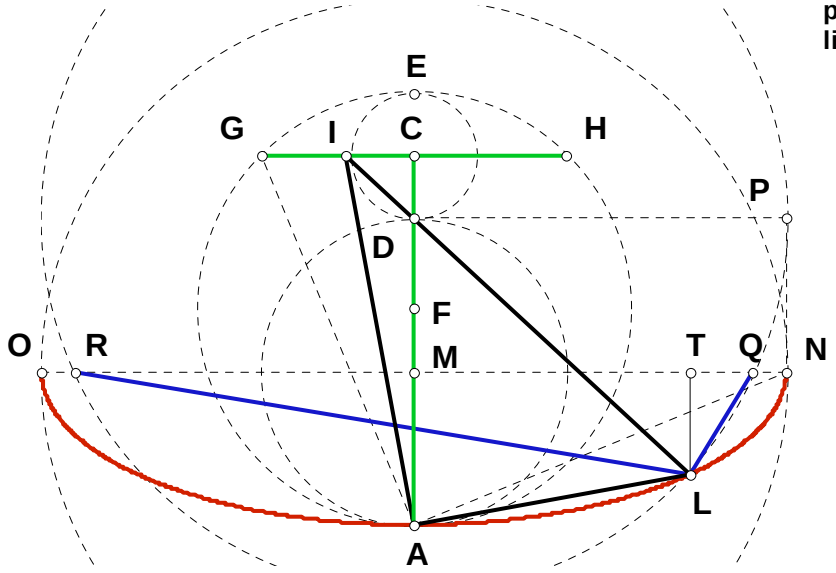
032405a.gsp





Elipse Projected From a Perpendicular. 032905

Let AC be some perpendicular on some line GH.



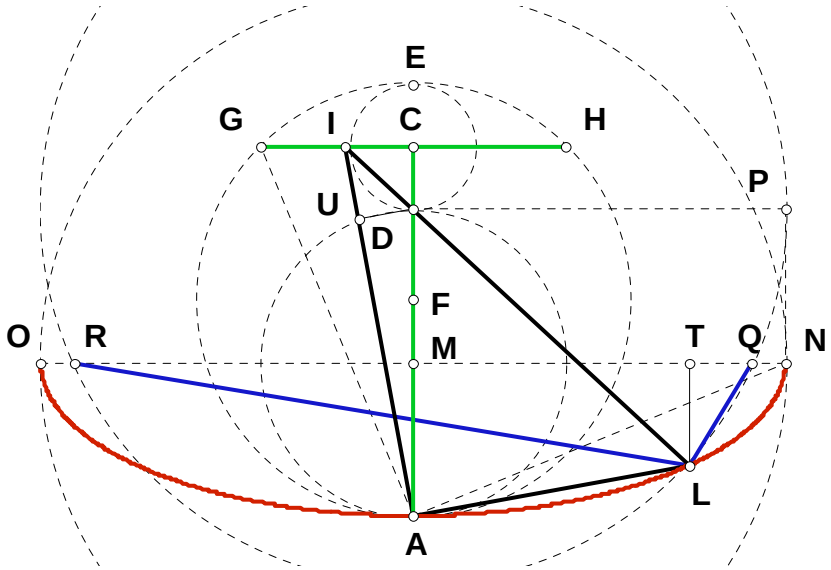
$N_1 := 1.9167$

$N_2 := .3244$

$N_3 := .437$

$AC := N_1 \quad CD := N_2 \quad CE := CD \quad CG := \sqrt{CE \cdot AC} \quad GH := 2 \cdot CG$

$GI := N_3 \quad CI := CG - GI \quad AD := AC - CD \quad AI := \sqrt{AC^2 + CI^2} \quad AM := \frac{AD}{2}$



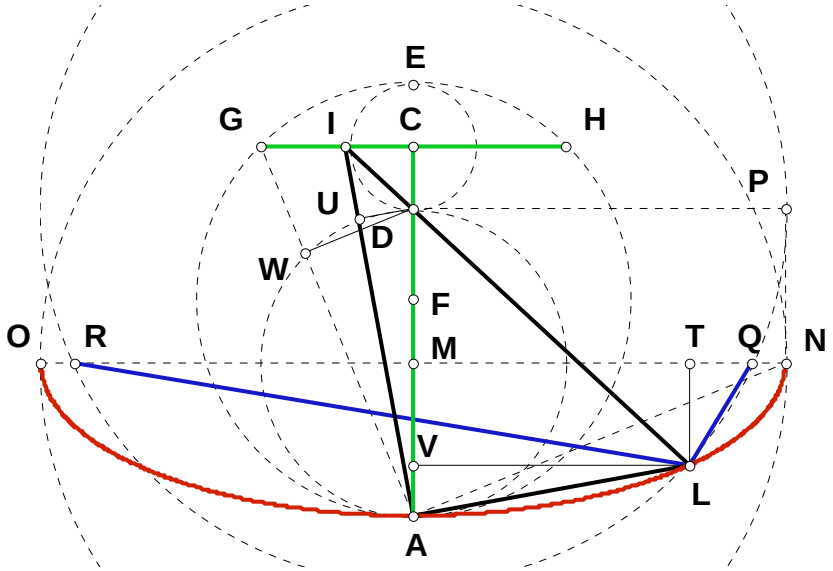
$DM := AM$

$DU := \frac{CI \cdot AD}{AI}$

$AU := \frac{AC \cdot AD}{AI}$

$IU := AI - AU$

$AL := \frac{DU \cdot AI}{IU}$



$$IL := \sqrt{AI^2 + AL^2}$$

$$DI := \sqrt{DU^2 + IU^2}$$

$$DL := IL - DI$$

$$DV := \frac{CD \cdot DL}{DI}$$

$$MV := DV - DM$$

$$AV := AM - MV$$

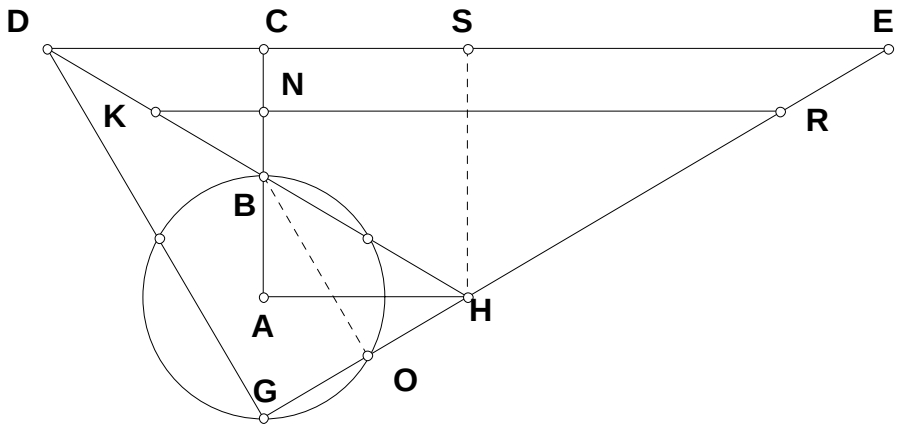
$$LV := \sqrt{AL^2 - AV^2}$$

$$MT := LV$$

$$AG := \sqrt{CG^2 + AC^2} \quad DW := \frac{CG \cdot AD}{AG} \quad AW := \frac{AC \cdot AD}{AG} \quad GW := AG - AW$$

$$AN := \frac{DW \cdot AG}{GW} \qquad MN := \sqrt{AN^2 - AM^2} \qquad ON := 2 \cdot MN$$

$$ON - \sqrt{\left(N_2 - N_1\right)^2 \cdot \frac{N_1}{N_2}} = 0$$



033005c

N^3 and More

$N_1 := 1$

$N_2 := 2 \quad A := N_2$

$N_3 := 4 \quad N := N_3$

AB is the unit AH/AB is the constant one. BC/BN is constant two.

$$AB := N_1 \quad AH := N_2 \quad BH := \sqrt{AB^2 + AH^2} \quad GO := \frac{AB \cdot 2 \cdot AB}{BH} \quad HO := BH - GO$$

$$DH := \frac{BH \cdot BH}{HO} \quad AC := \frac{AB \cdot DH}{BH} \quad BO := \sqrt{BH^2 - HO^2} \quad DG := \frac{BO \cdot BH}{HO}$$

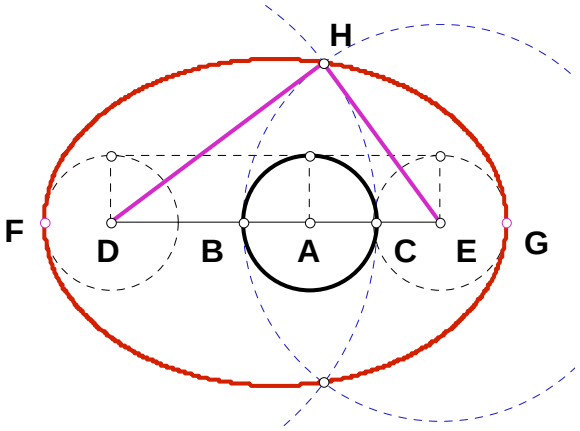
$$DE := \frac{BH \cdot DG}{AB} \quad CD := \frac{DG^2}{DE} \quad BC := AC - AB \quad CE := DE - CD$$

$$\frac{CE}{BC} - \left(\frac{AH}{AB}\right)^3 = 0 \qquad \frac{N_2^3}{N_1^3} - \frac{CE}{BC} = 0$$

More $\left(A^3 \cdot N\right) - (N - 1) \cdot A$ **Let** N_3 **be N**

$$BN := \frac{BC}{N_3} \quad KN := \frac{CD}{N_3} \quad CG := AC + AB \quad GN := 2 \cdot AB + \frac{BC}{N_3} \quad NR := \frac{CE \cdot GN}{CG}$$

$$\left[\frac{N_2^3}{N_1^3} \cdot N_3 - \frac{N_2 \cdot \left(N_3 - 1\right)}{N_1}\right] - \frac{NR}{BN} = 0 \qquad A^3 \cdot N - (N - 1) \cdot A = 26 \qquad \frac{NR}{BN} = 26$$



Just Another Ellipse

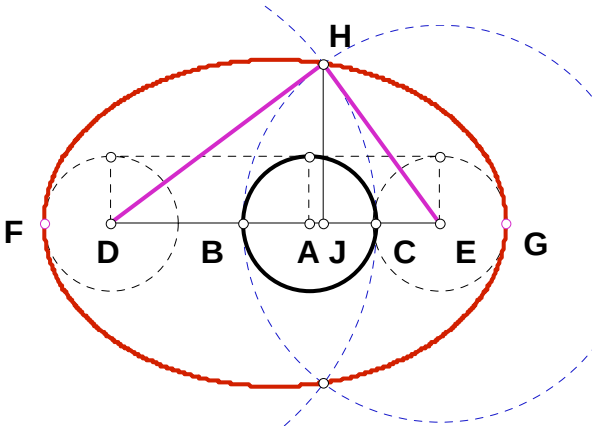
033105b

Given the difference between the foci and difference between the proportional radii, etc., etc.

$N_1 := 1.708 \quad N_2 := .693 \quad N_3 := 1.032 \quad N_4 := 2.435$

$DE := N_1 \quad BC := N_2 \quad FG := DE + BC \quad AB := \frac{BC}{2} \quad AD := N_3$

$CD := AD + AB \quad BE := DE - AD + AB \quad EH := BE \quad DH := CD$



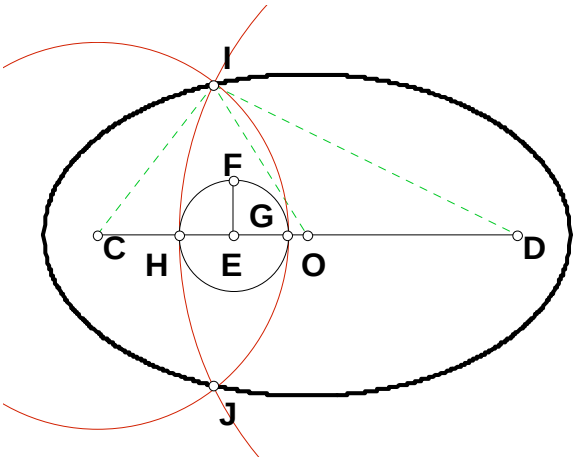
$$DJ := \frac{DH^2 + DE^2 - EH^2}{2 \cdot DE}$$

$$HJ := \sqrt{DH^2 - DJ^2}$$

$HJ = 0.825$

$$\frac{\sqrt{-N_3 \cdot (N_3 - N_1) \cdot N_2 \cdot (N_2 + 2 \cdot N_1)}}{N_1} - HJ = 0$$

041205



$N_1 := 2.188 \quad N_2 := .278$

$N_3 := 3.095$

$CD := N_1 \quad CO := \frac{CD}{2}$

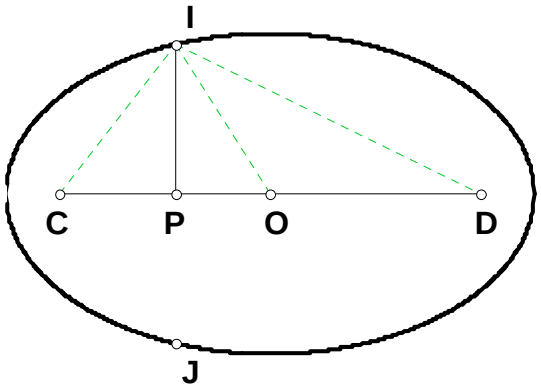
$EF := N_2 \quad CE := \frac{CD}{N_3}$

$CG := CE + EF$

$DH := CD - CG + 2 \cdot EF$

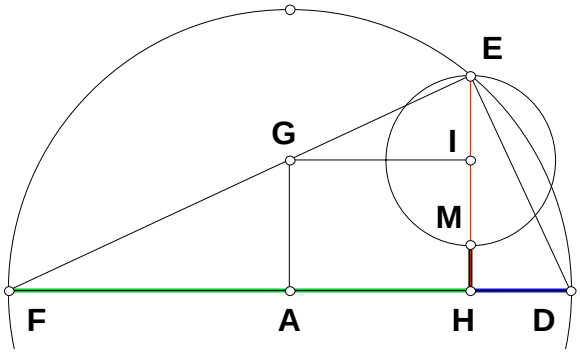
$CI := CG \quad DI := DH \quad IO := \frac{\sqrt{2 \cdot CI^2 - CD^2 + 2 \cdot DI^2}}{2}$

$$IP := \frac{\sqrt{(-CD + DI - CI)\,(CD + DI + CI)\,(CD - DI - CI)\,(CD + DI - CI)}}{2 \cdot CD}$$



$$2 \cdot \frac{\sqrt{N_2 \cdot (N_1 + N_2) \cdot (N_3 - 1)}}{N_3} - IP = 0$$

N^3 N Cubed 041305b



$N_1 := 1 \qquad N_2 := 36$

$DH := N_1 \quad FH := N_2$

$DF := DH + FH \quad AD := \frac{DF}{2}$

$EH := \sqrt{DH \cdot FH} \quad HI := \frac{EH \cdot AD}{FH}$

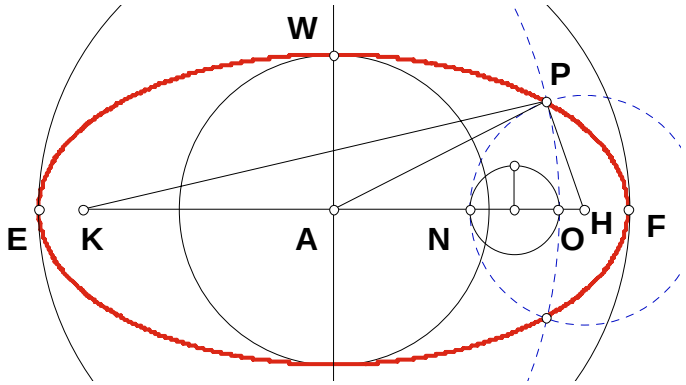
$HM := EH - 2 \cdot (EH - HI)$

$$\frac{FH}{HM} - \left(\frac{DH}{HM}\right)^3 = 0$$

$DF := \sqrt{DH^2 + EH^2} \qquad EF := \sqrt{FH^2 + EH^2}$

$$\frac{FH}{HM} - \left(\frac{EF}{DF}\right)^3 = 0$$

$$\frac{FH}{HM} = 216 \qquad \left(\frac{FH}{DH}\right)^{1.5} = 216$$



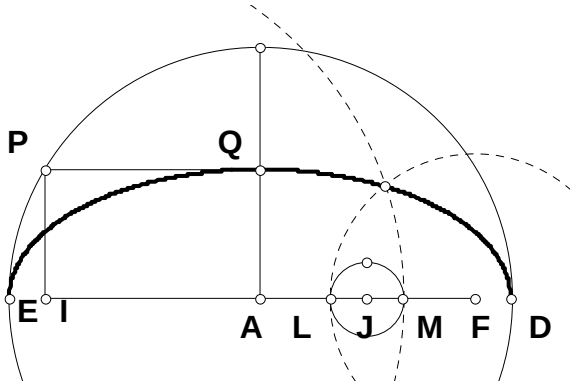
042205

Given HK, HF, AP provide HP and KP.

$N_1 := 2.604$

$N_2 := .229$

$N_3 := 1.237$



042205B

Given the major axis and the difference between the two foci, whatis the minor axis?

$N_1 := 2.604$

$N_2 := 2.234$

$DE := N_1 \quad FI := N_2 \quad EI := \frac{DE - FI}{2} \quad DI := DE - EI \quad EP := \sqrt{EI \cdot DI}$

$AQ := EP$

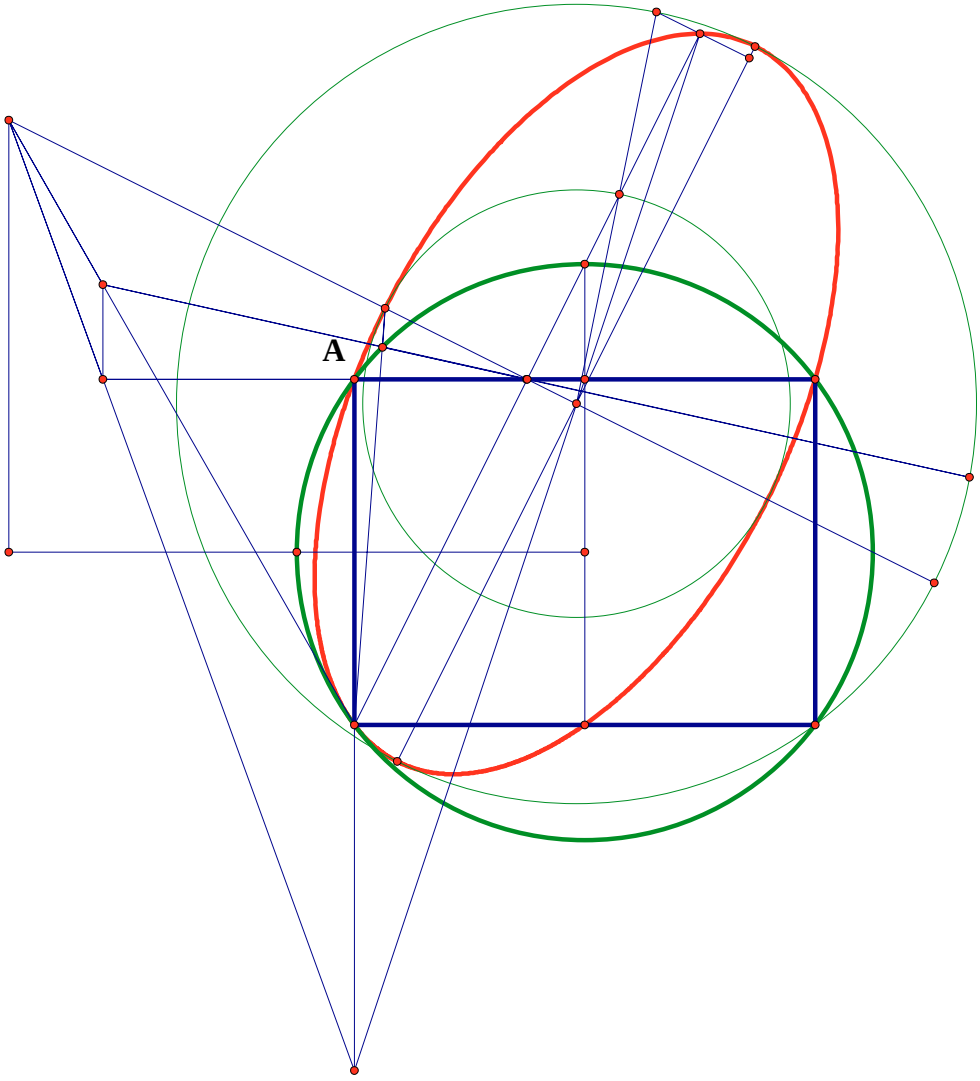
$$AQ - \frac{1}{2}\cdot\sqrt{\left(N_1 + N_2\right)\cdot\left(N_1 - N_2\right)} = 0$$

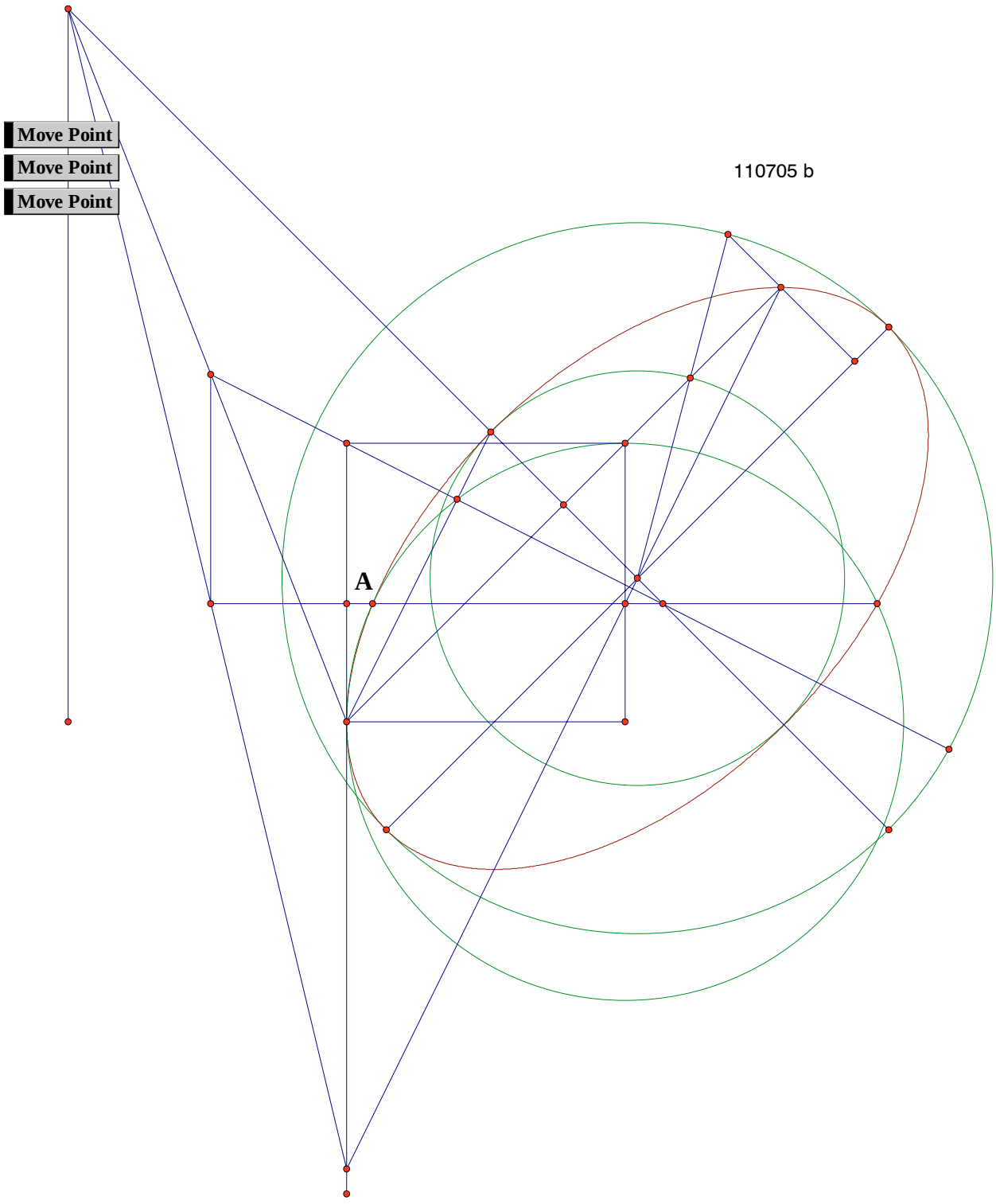
$N_2 := AQ$

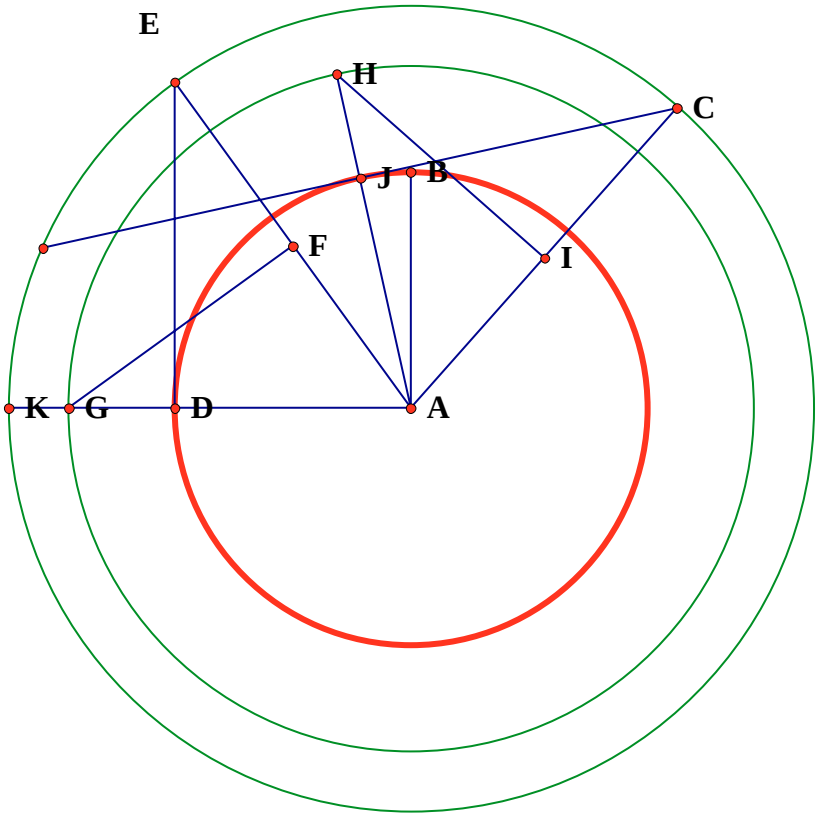
What are the foci if given the major and minor?

$$FI - \sqrt{N_1^2 - 4\cdot N_2^2} = 0$$

110705 a




Move Point
Move Point
Move Point
110705 b
A



110706 A. MCD

Going around in a circle

What is the tanget to AD from C?
Although no one in their right mind would do this for a circle, it is essential as an introduction to finding the inverse ellilpse for any external point to it.

$N_1 := 3.12208$

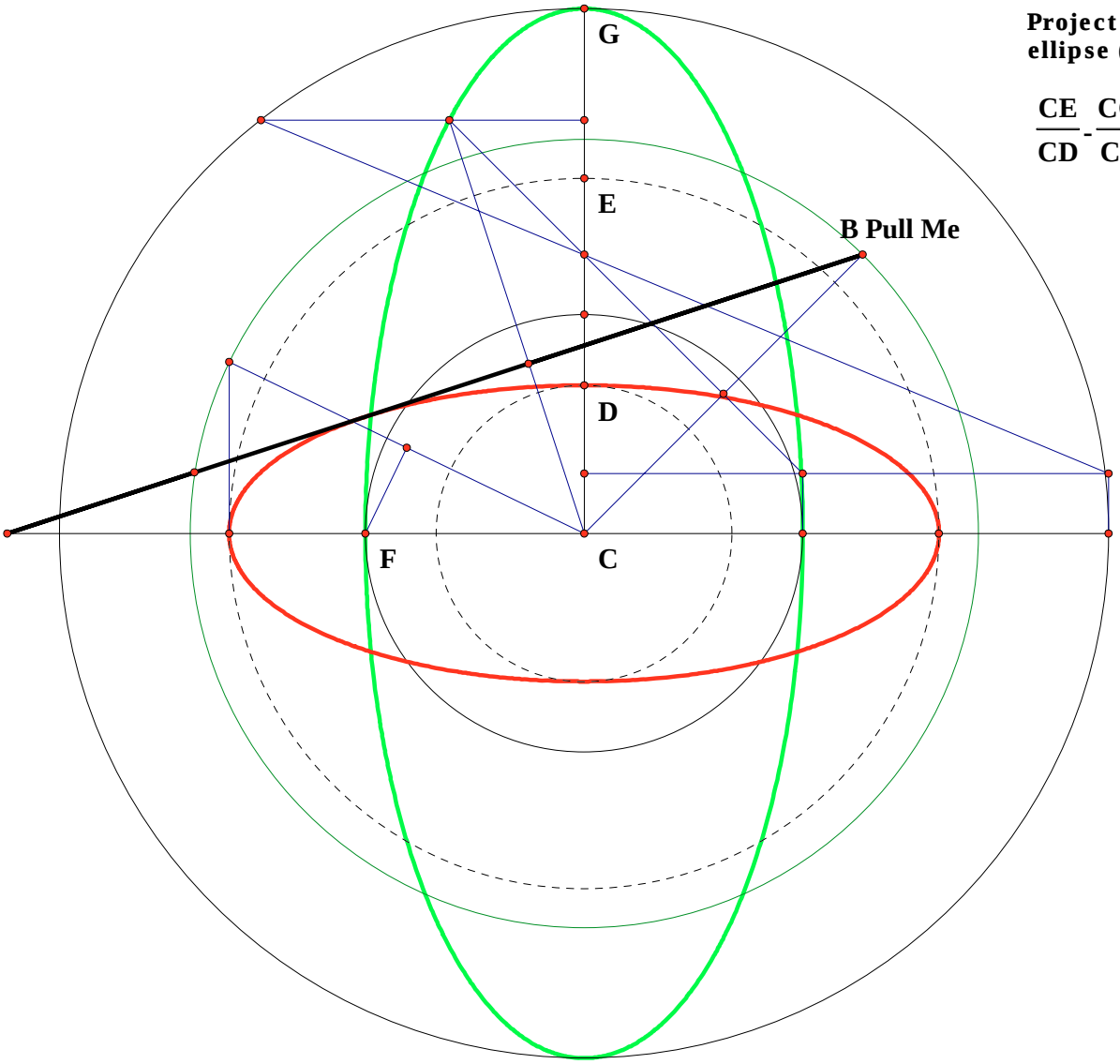
$N_2 := 5.31813$

$AD := N_1 \quad AC := N_2 \quad AE := AC$

$DE := \sqrt{AE^2 - AD^2} \quad AF := \frac{AE}{2} \quad AG := \frac{AE \cdot AF}{AD} \quad AH := AG \quad AI := \frac{AC}{2}$

$AJ := \frac{AI \cdot AC}{AH} \quad AJ - N_1 = 0 \quad CJ := \sqrt{AC^2 - AJ^2} \quad CJ = 4.305$

From any point B construct a tangent to any ellipse (red).



Project the inverse ellipse (green) and solve.

$$\frac{CE}{CD} - \frac{CG}{CF} = 0.00000$$

Show Axes

Given an Ellipse

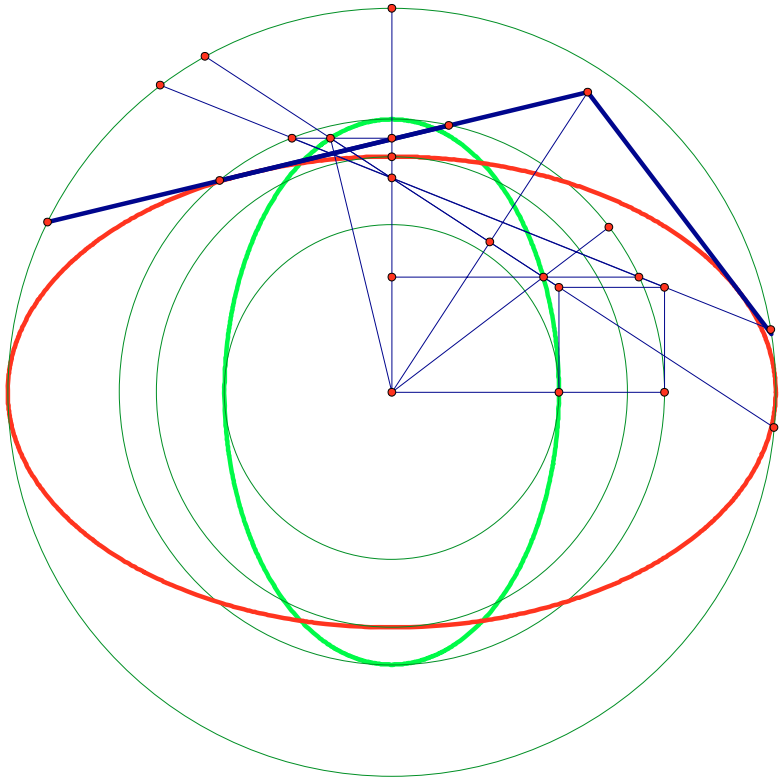
Given Any Point

Find Inverse Proportional Ellipse

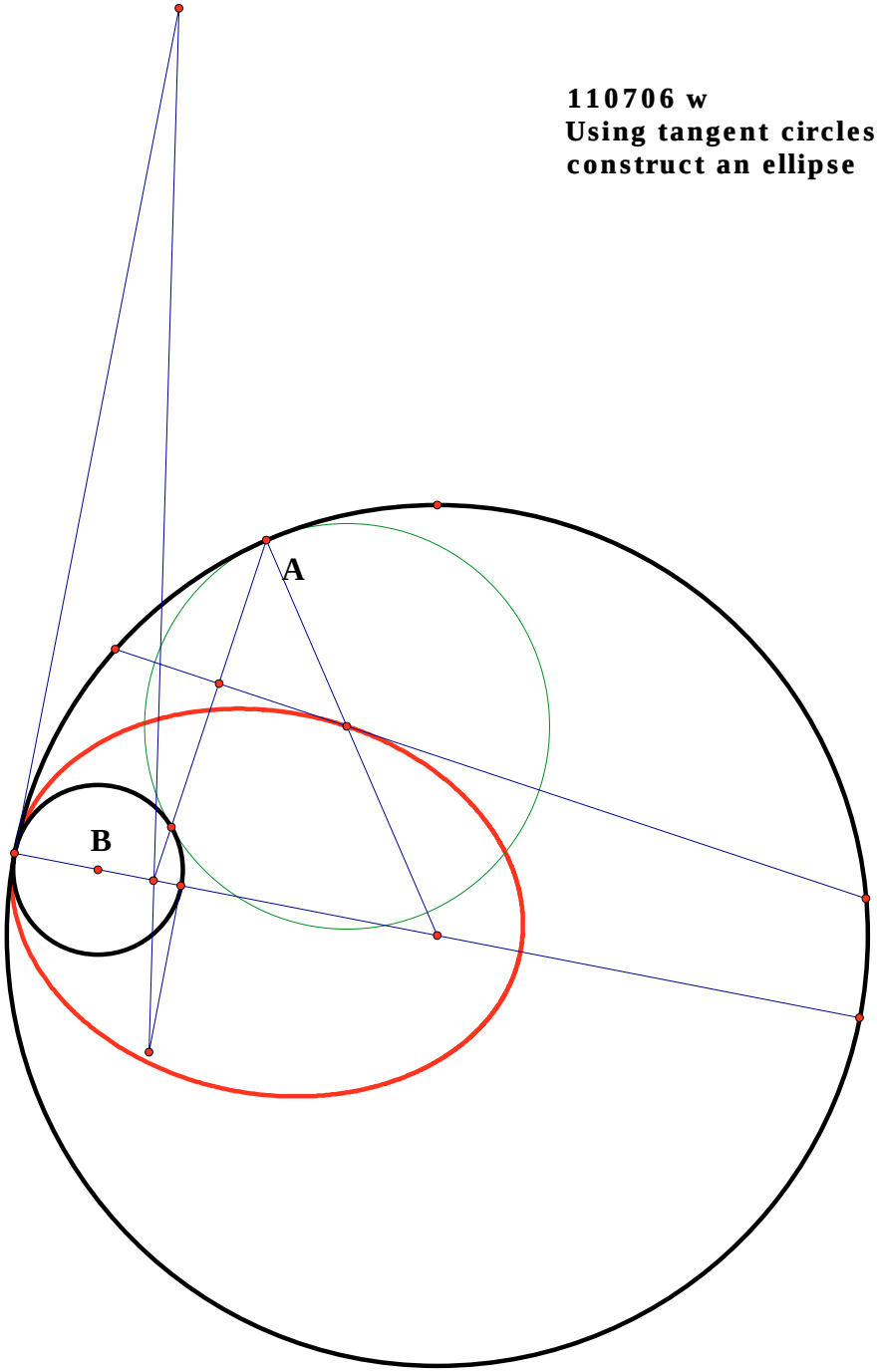
Hide Inverse Proportional Ellipse

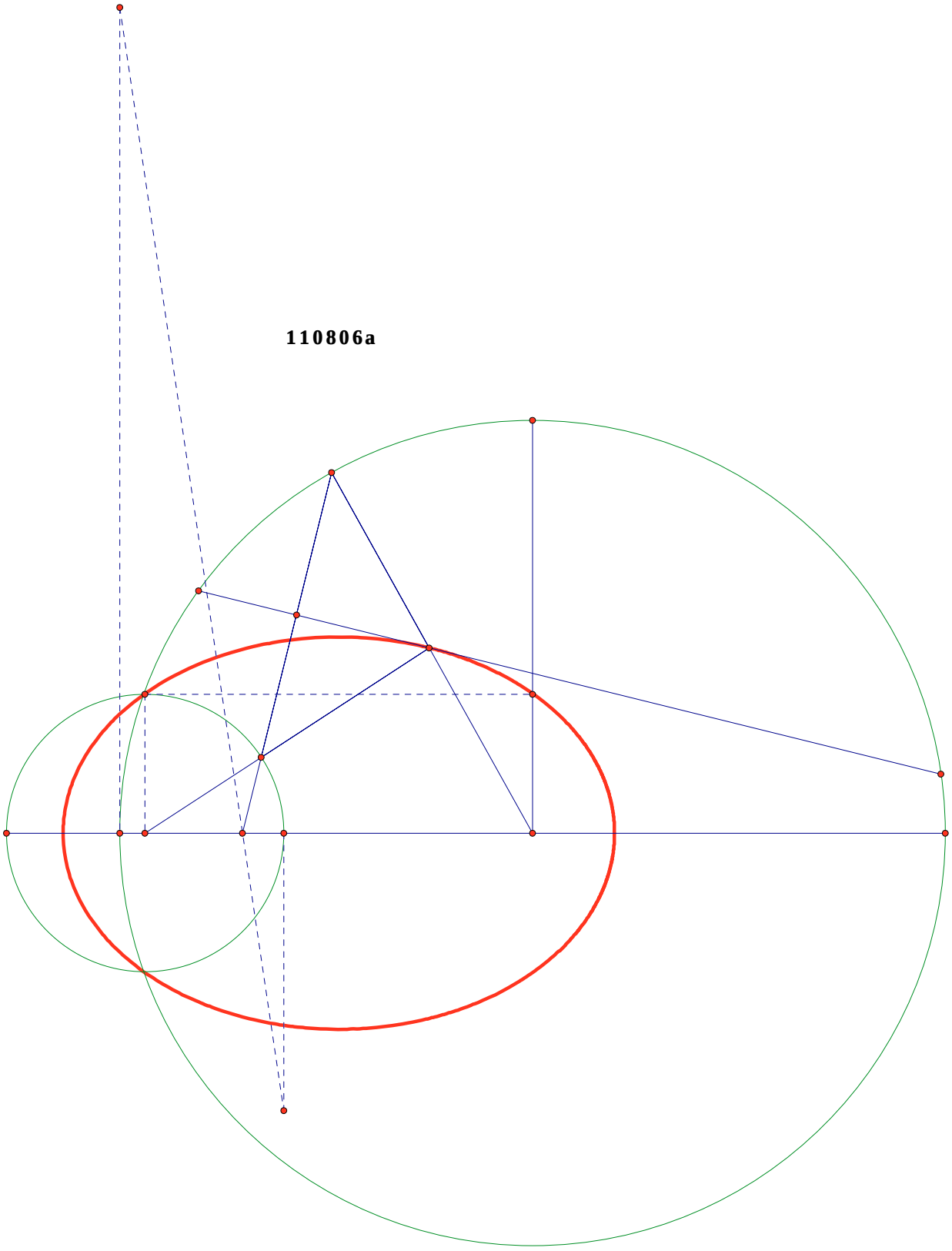
Hide Objects

Hide Objects

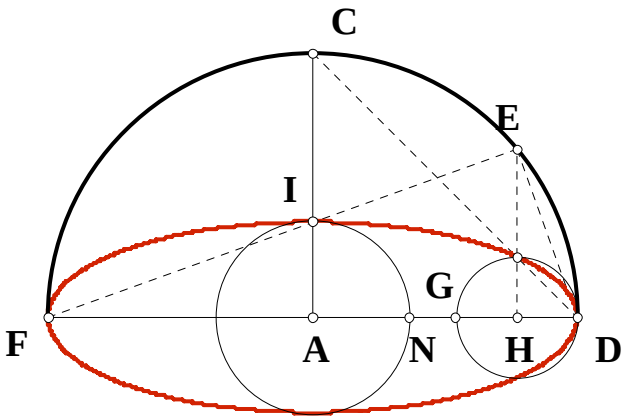


110706 w
Using tangent circles
construct an ellipse




110806a

060807A MCD



$N_1 := 1 \qquad N_2 := .49$

$DF := N_1 \qquad AI := N_2$

$AF := \frac{DF}{2} \qquad AN := AI \quad AD := AF$

$FI := \sqrt{AF^2 + AI^2} \qquad DE := \frac{AI \cdot DF}{FI}$

$DH := \frac{DE^2}{DF} \qquad GH := DH$

$GN := AD - (AN + GH + DH)$

Some Algebraic Names

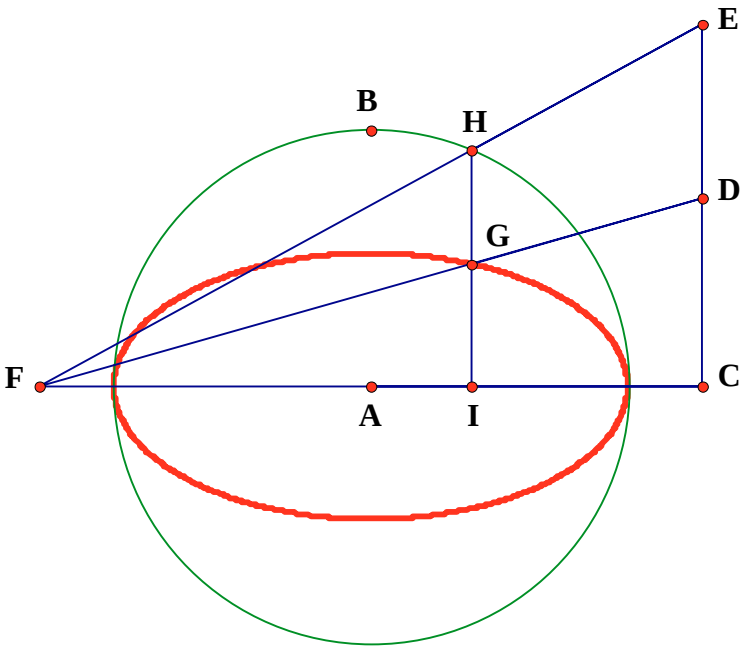
$$\frac{N_1}{2} - AF = 0 \qquad \frac{1}{2}\cdot\sqrt{(N_1)^2 + 4\cdot(N_2)^2} - FI = 0 \qquad 2\cdot N_2\cdot\frac{N_1}{\sqrt{(N_1)^2 + 4\cdot(N_2)^2}} - DE = 0$$

$$\frac{4\cdot(N_2)^2\cdot N_1}{(N_1)^2 + 4\cdot(N_2)^2} - DH = 0 \qquad \frac{\left[-8\cdot(N_2)^3 - 12\cdot N_1\cdot(N_2)^2 - 2\cdot N_2\cdot(N_1)^2 + (N_1)^3\right]}{2\cdot\left[(N_1)^2 + 4\cdot(N_2)^2\right]} - GN = 0$$

Subing 1 for N1

$$\frac{1}{2} - AF = 0 \qquad \frac{1}{2}\cdot\sqrt{1 + 4\cdot(N_2)^2} - FI = 0 \qquad 2\cdot\frac{N_2}{\sqrt{1 + 4\,(N_2)^2}} - DE = 0$$

$$4\cdot\frac{(N_2)^2}{\left[1 + 4\cdot(N_2)^2\right]} - DH = 0 \qquad \frac{-1}{2}\cdot(2\cdot N_2 + 1)\cdot\frac{\left[4\cdot(N_2)^2 + 4\cdot N_2 - 1\right]}{\left[1 + 4\cdot(N_2)^2\right]} - GN = 0$$



060807 C.MCD

Equation for an Ellipse

$N_1 := 3.38667$

$N_2 := 2.05199$

$N_3 := 3.57039$

$N_4 := .94919$

$AB := N_1 \quad AI := N_2 \quad CE := N_3 \quad CD := N_4$

$HI := \sqrt{(AB + AI)\cdot(AB - AI)} \quad GI := \frac{CD \cdot HI}{CE} \quad AG := \sqrt{AI^2 + GI^2}$

$$\frac{N_4 \cdot \sqrt{(N_1 + N_2)\cdot(N_1 - N_2)}}{N_3} - GI = 0$$

$$\frac{1}{N_3} \cdot \sqrt{N_2^2 \cdot N_3^2 + N_4^2 \cdot N_1^2 - N_4^2 \cdot N_2^2} - AG = 0$$

062007c Tangents from the Axis

$m\angle DEF = 52.68254°$

$m\angle FEG = 52.68254°$

$m\angle FEC = 90.00000°$

$KJ = 4.27389$ cm

$JC = 4.16632$ cm

$\sqrt{JC \cdot KJ} = 4.21976$ cm $JL = 4.21976$ cm

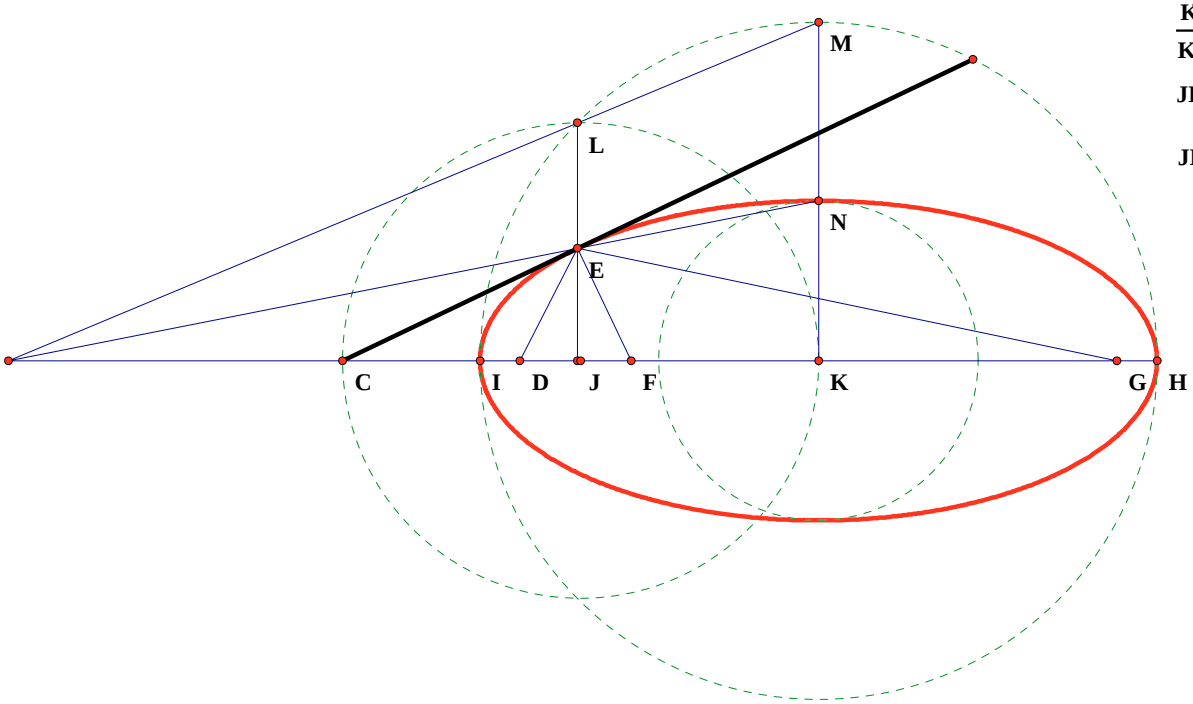
$KM = 6.00604$ cm

$KN = 2.83557$ cm

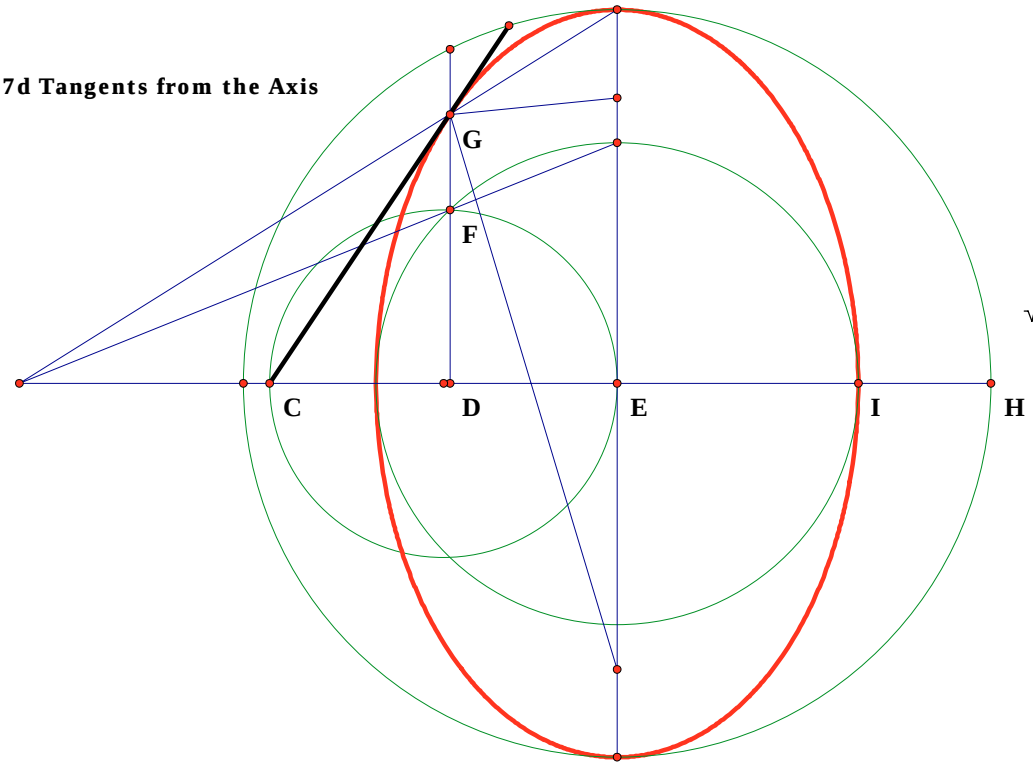
$\frac{KN}{KM} = 0.47212$

$JE = 1.99223$ cm

$JL \cdot \frac{KN}{KM} - JE = 0.00000$ cm



062007d Tangents from the Axis



CD = 2.89445 cm

ED = 2.68826 cm

DF = 2.78945 cm

$\sqrt{CD \cdot ED}$**-DF = 0.00000 cm**

DG = 4.32463 cm

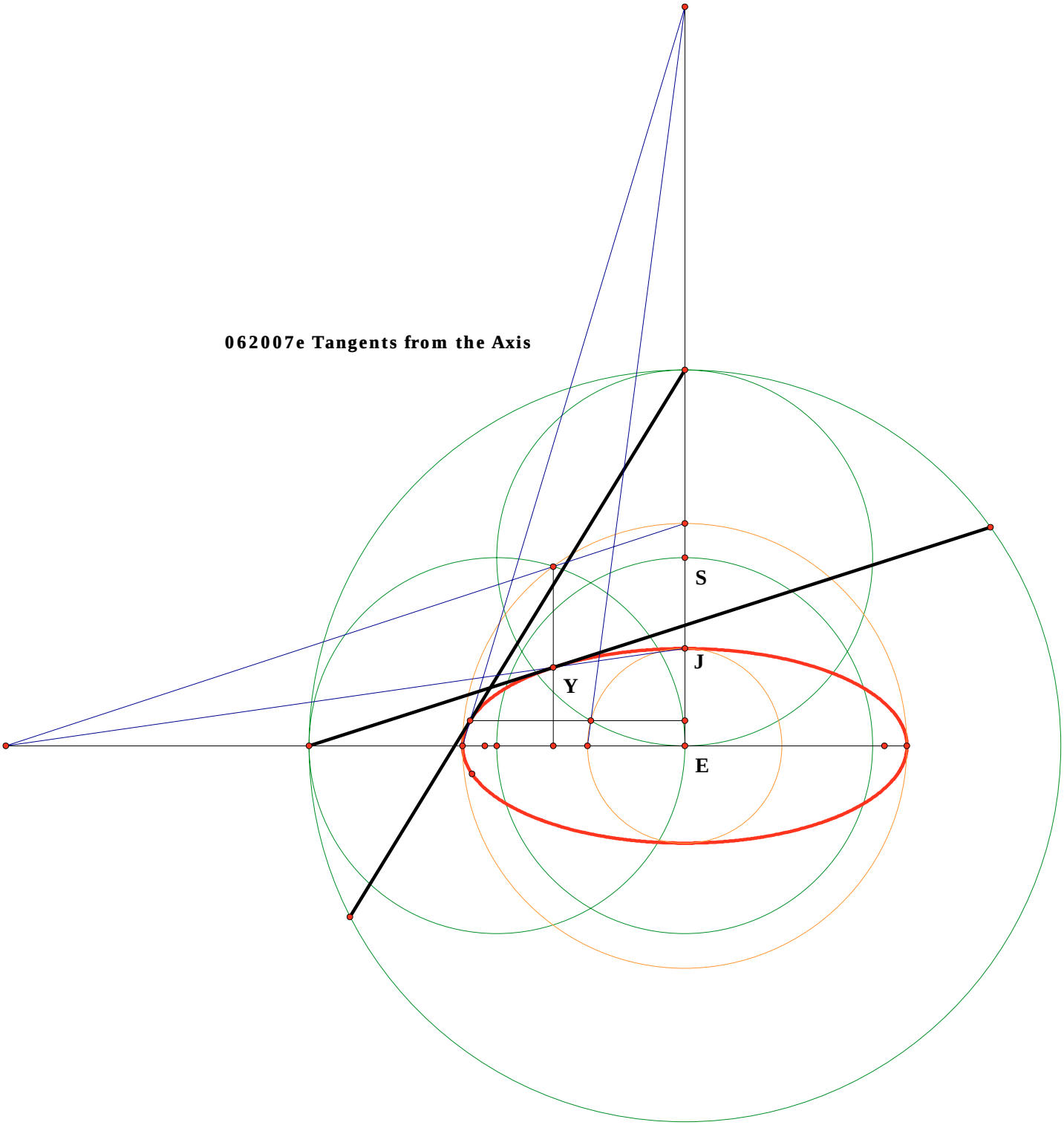
EH = 6.00604 cm

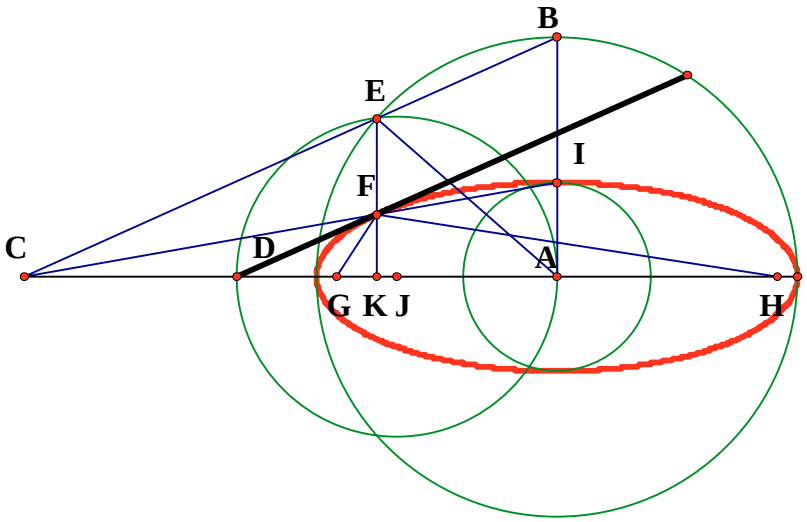
EI = 3.87398 cm

$\frac{EH}{EI}$ **= 1.55035**

$DF \cdot \frac{EH}{EI}$**-DG = 0.00000 cm**

062007e Tangents from the Axis





$N_1 := 3.17500$

$N_2 := 1.24993$

$N_3 := 4.23333$

$AB := N_1$

$AI := N_2$

$AD := N_3$

$AJ := \frac{AD}{2}$ From 080193 $EK := \frac{AB \cdot \sqrt{(2 \cdot AJ - AB) \cdot (2 \cdot AJ + AB)}}{2 \cdot AJ}$

$AK := \sqrt{AB^2 - EK^2}$ $DK := AD - AK$ $FK := \frac{AI \cdot EK}{AB}$ $DF := \sqrt{DK^2 + FK^2}$

$DL := \frac{DF^2}{DK}$ $AG := \sqrt{AB^2 - AI^2}$ $AH := AG$

$HK := AH + AK$ $GK := AG - AK$

$FG := \sqrt{FK^2 + GK^2}$

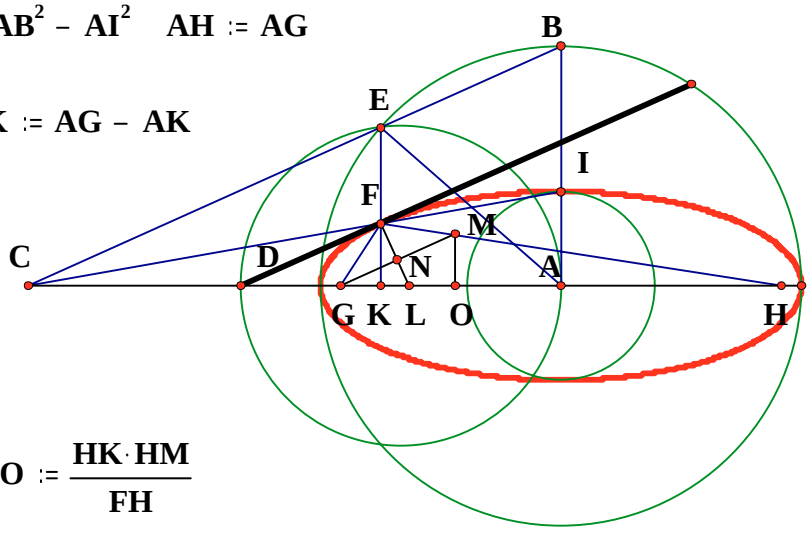
$FM := FG$

$FH := \sqrt{HK^2 + FK^2}$

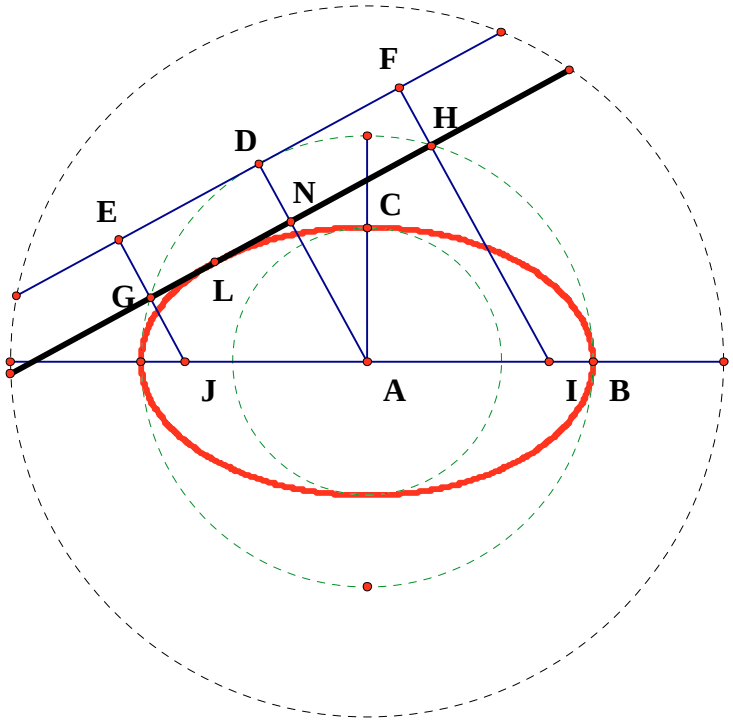
$HM := FH - FM$ $HO := \frac{HK \cdot HM}{FH}$

$GH := 2 \cdot AH$ $GO := GH - HO$

$MO := \frac{FK \cdot HM}{FH}$ $\frac{GO}{MO} - \frac{DK}{FK} = 0$ $N_2 \cdot \frac{\sqrt{(N_3 - N_1) \cdot (N_3 + N_1)}}{N_3} - FK = 0$



Found on the Internet 062407



Found the construction, now I explore it with equations.

$N_1 := 2.98979$

$N_2 := 1.77791$

$N_3 := 1.83972$

$AB := N_1 \quad AC := N_2$

$EJ := N_3$

$AJ := \sqrt{AB^2 - AC^2}$

$FI := (AB - EJ) + AB$

$DE := \sqrt{AJ^2 - (AB - EJ)^2} \qquad AN := \dfrac{\sqrt{DE^2 \cdot (DE + AB) \cdot (-DE + AB)}}{DE}$

$DN := AB - AN \quad GJ := EJ - DN \quad HI := FI - DN \quad GL := \dfrac{GJ \cdot 2 \cdot DE}{GJ + HI}$

$HL := 2 \cdot DE - GL \quad JL := \sqrt{GL^2 + GJ^2} \quad IL := \sqrt{HI^2 + HL^2} \qquad (JL + IL) - 2 \cdot AB = 0$

Algebraic Names

$AJ - \sqrt{N_1^2 - N_2^2} = 0 \qquad FI - \left(2 \cdot N_1 - N_3\right) = 0$

$$DE - \sqrt{-N_2^2 + 2 \cdot N_1 \cdot N_3 - N_3^2} = 0 \qquad \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} - AN = 0$$

$$N_1 - \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} - DN = 0$$

$$N_3 - N_1 + \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} - GJ = 0$$

$$\left(N_1 - N_3 + \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2}\right) - HI = 0$$

$$\left(N_3 - N_1 + \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2}\right) \cdot \frac{\sqrt{-N_2^2 + 2 \cdot N_1 \cdot N_3 - N_3^2}}{\sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2}} - GL = 0$$

$$\sqrt{-N_2^2 + 2 \cdot N_1 \cdot N_3 - N_3^2} \cdot \frac{\left(\sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} - N_3 + N_1\right)}{\sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2}} - HL = 0$$

$$N_1 \cdot \sqrt{\frac{\left[\left[\left(2 \cdot N_3 \cdot \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} - 4 \cdot N_1 \cdot N_3\right) \ldots\right] \ldots + 2 \cdot N_3^2 + N_2^2 + 2 \cdot N_1^2\right] + -2 \cdot N_1 \cdot \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2}}{\left(N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2\right)}} - JL = 0$$

$$N_1 \cdot \sqrt{\frac{\left(2 \cdot N_1^2 - 4 \cdot N_1 \cdot N_3 + 2 \cdot N_3^2 - 2 \cdot N_3 \cdot \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} \ldots + 2 \cdot N_1 \cdot \sqrt{N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2} + N_2^2\right)}{\left(N_1^2 + N_2^2 - 2 \cdot N_1 \cdot N_3 + N_3^2\right)}} - IL = 0$$

Multiply and Divide a Line by a Line.

Unit

A = 1.64029

B = 2.23022

C = 3.65820

D = 0.73548

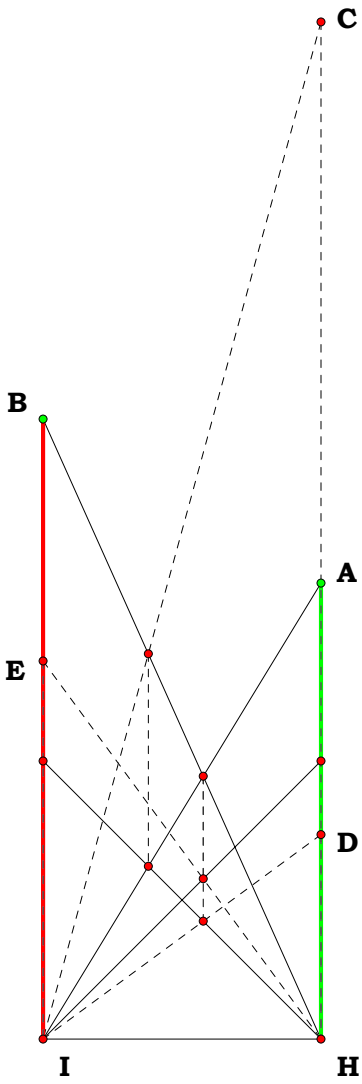
E = 1.35965

A·B-C = 0.00000

$\frac{A}{B}$-D = 0.00000

$\frac{B}{A}$-E = 0.00000

johnclark8659@hotmail.com



Multiply and Divide a Line by a Line.

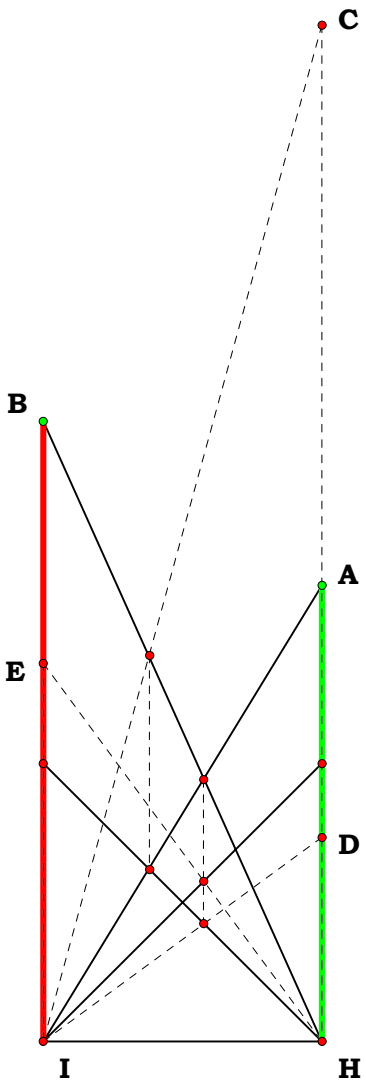
John Clark

$HI := 3.67771$ $Unit := HI$

$N_1 := 4$ $N_2 := 3$

$AH := N_1 \cdot HI$ $BI := N_2 \cdot HI$

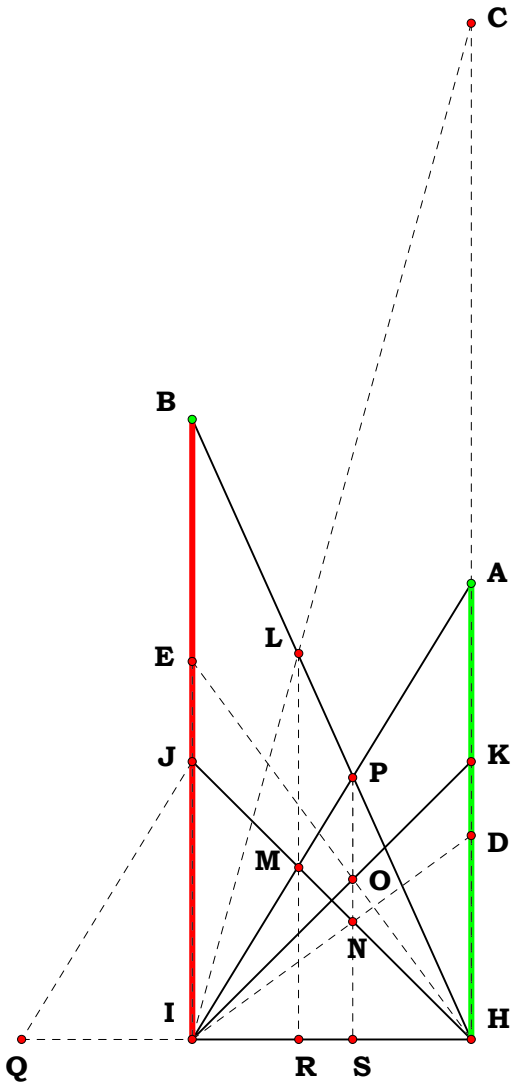
$JI := HI$ $HK := HI$

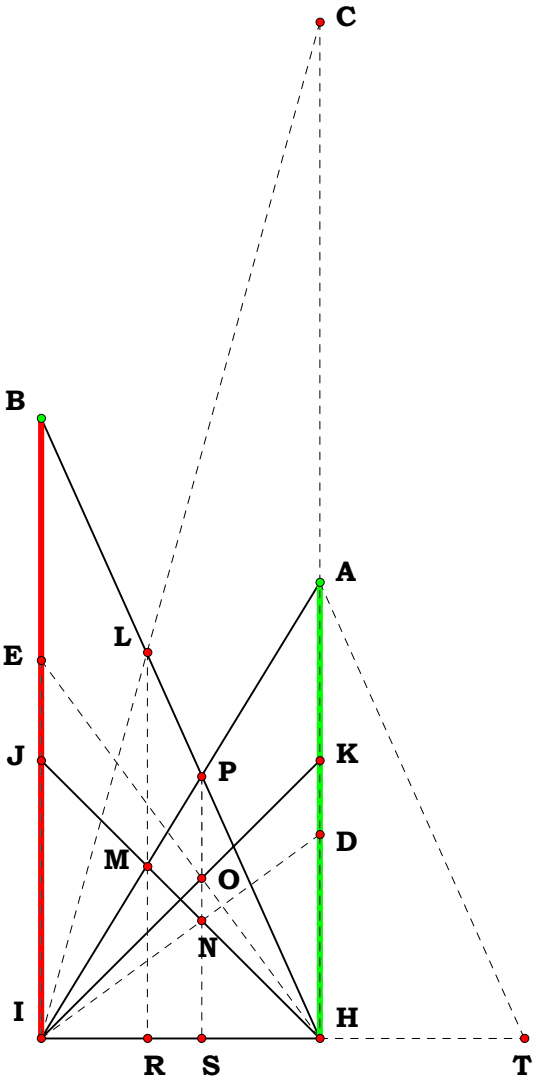


$$IQ := \frac{HI^2}{AH} \qquad IR := \frac{IQ \cdot HI}{HI + IQ}$$

$$LR := \frac{BI \cdot (HI - IR)}{HI} \qquad CH := \frac{LR \cdot HI}{IR}$$

$$N_3 := \frac{CH}{HI} \qquad N_1 \cdot N_2 - N_3 = 0$$





$$HT := \frac{HI \cdot AH}{BI} \qquad HS := \frac{HT \cdot HI}{HI + HT}$$

$$NS := HS \qquad IS := HI - HS$$

$$DH := \frac{NS \cdot HI}{IS} \qquad N_4 := \frac{DH}{HI}$$

$$\frac{N_1}{N_2} - N_4 = 0$$

$$OS := \frac{HK \cdot IS}{HI} \qquad EI := \frac{OS \cdot HI}{HS}$$

$$N_5 := \frac{EI}{HI}$$

$$\frac{N_2}{N_1} - N_5 = 0$$

Basic Arithmetic in Geometry

Introduction

An outline of basic math moves in Geometry mainly concerning cardinal operations.

A primary mechanism required for language is the ratio. And it is on a biological level first. On a conscious level, one must understand that as things are to each other, so too our mental manipulations of things must be to each other. This identity between reality and mentality is call rationality. It then follows that people who habitually lie, being aware of it or not, are not rational. On a religious level, when one says that God is Truth, they are enunciating a standard in rationality—of judgment.

Cardinal and Ordinal Operations.

These techniques are primarily focused not on ordinal operations but on cardinal. An example of an ordinal operation is Euclid's Book 1:1. The operations here depend first upon the unit.

Contents

The Unit	Technique 1
Addition Subtraction	Technique 2
Number Construction	Technique 3
Unit Ratio	Technique 4
Fractions.	Technique 5
Ratio Two Numbers.	Technique 6
Multiplication	Technique 7
Division	Technique 8

Basic Techniques

Technique 1. To construct a unit.

With a given line, assert two points.

$\overline{A0B1}$ is the unit by convention.

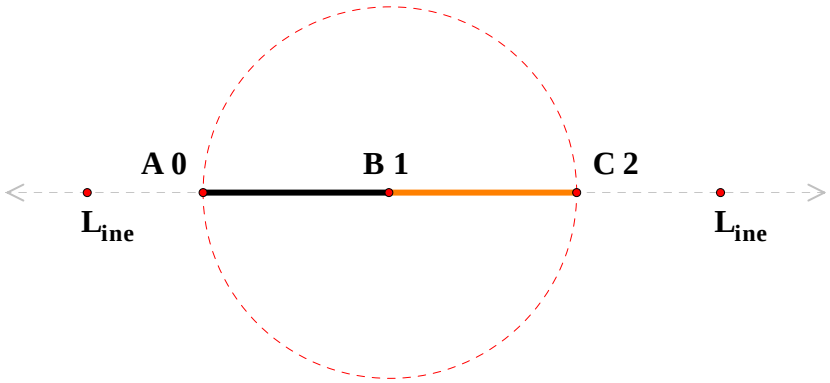
Every formal logic starts the same way—Arithmetic with the definition of the unit, so too in geometry. Craft is all about standards in construction and one starts by constructing our first standard.

Geometry is a relatiologic, which means the material difference is given, and the geometer asserts boundaries. The material difference in geometry is unspecified, of no concern to the geometer. He can neither add to, nor subtract from difference, he can only make things by asserting boundaries to it.

The construction of a unit is understood in this wise:—Between two assertions there is one and only one difference.

Note: Preserve both naming conventions, Geometric and Arithmetic.

Technique 2. To a given unit add another.



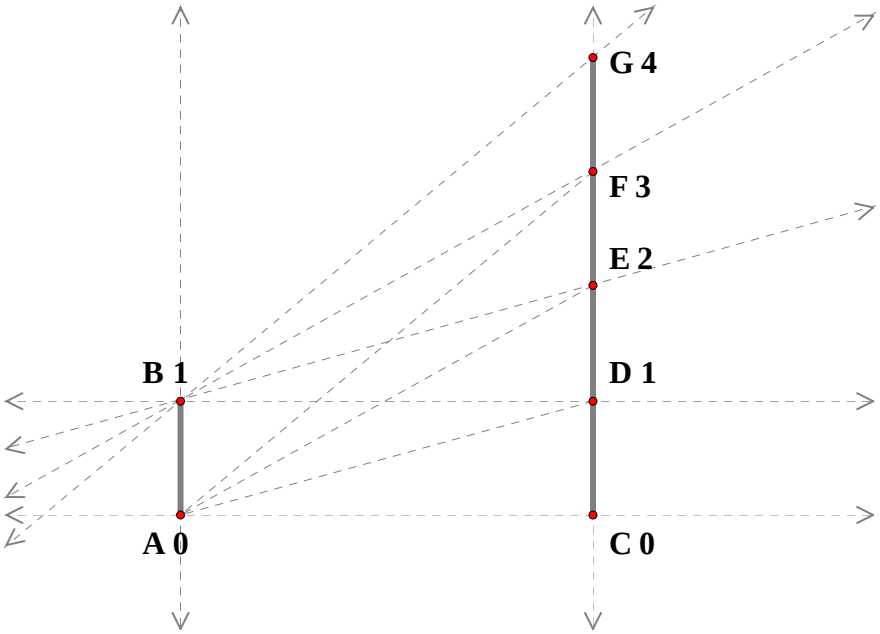
To a given line, Let $\overline{A1B0}$ be the given unit and to it, simply add another. Construct ⊙ B1A0.

$\overline{B1C2}$ is the required addition.

1 + 1 = 2 and 2 – 1 = 1.

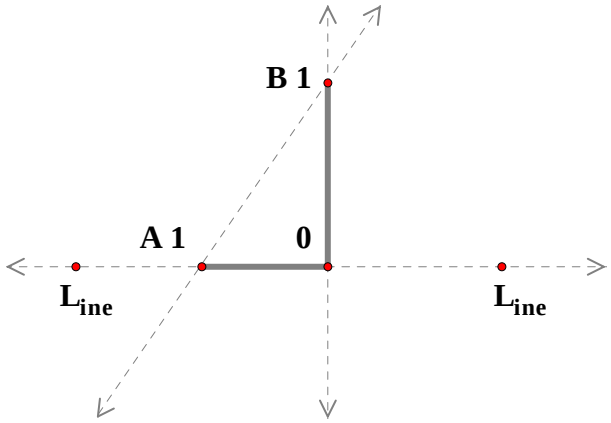
One need not drag this out for subtraction.

Technique 3: To construct a number.



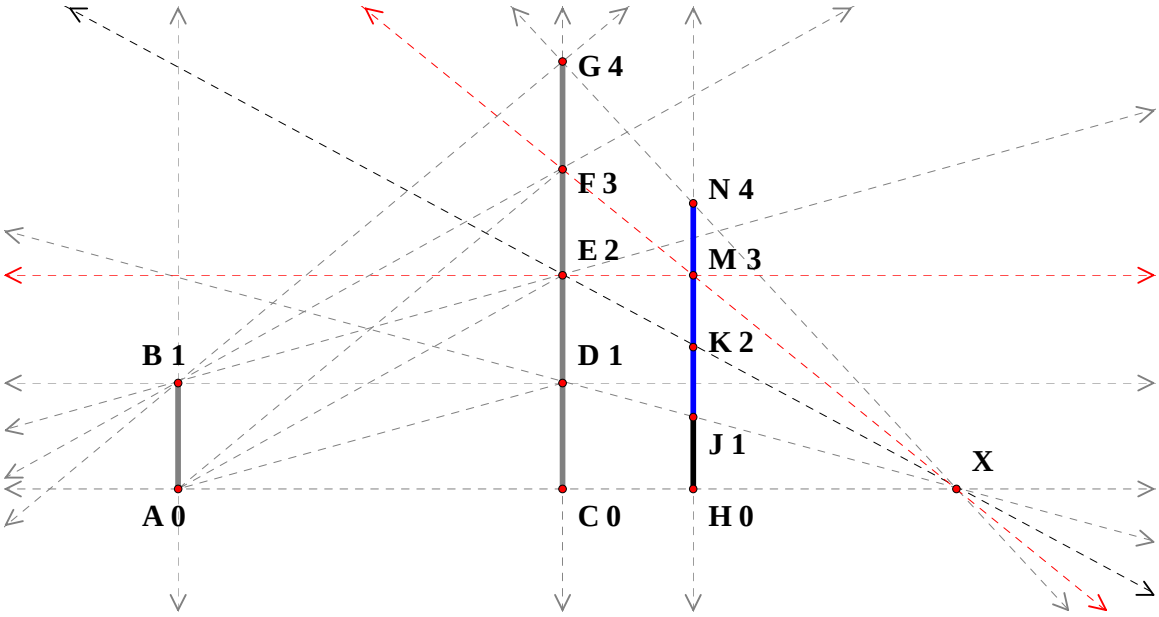
Given $\overline{A0B1}$ as our unit and 4 the number we are to construct, etc.,

Technique 4. To construct a ratio between linear units.



$\overline{0A1}$: $\overline{0B1}$ Is what was required .

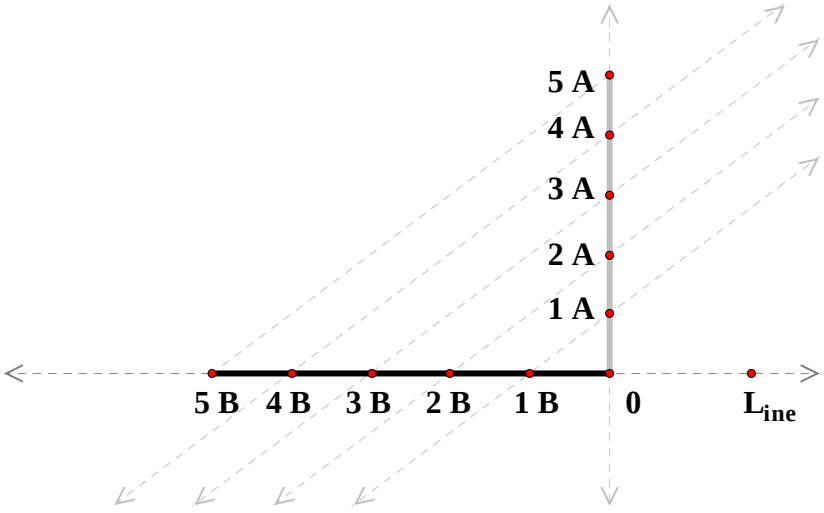
Technique 5. Construct a fraction.



Let $\overline{A0B1}$ be our given unit, and $\frac{2}{3}$ the fraction which we are to construct.

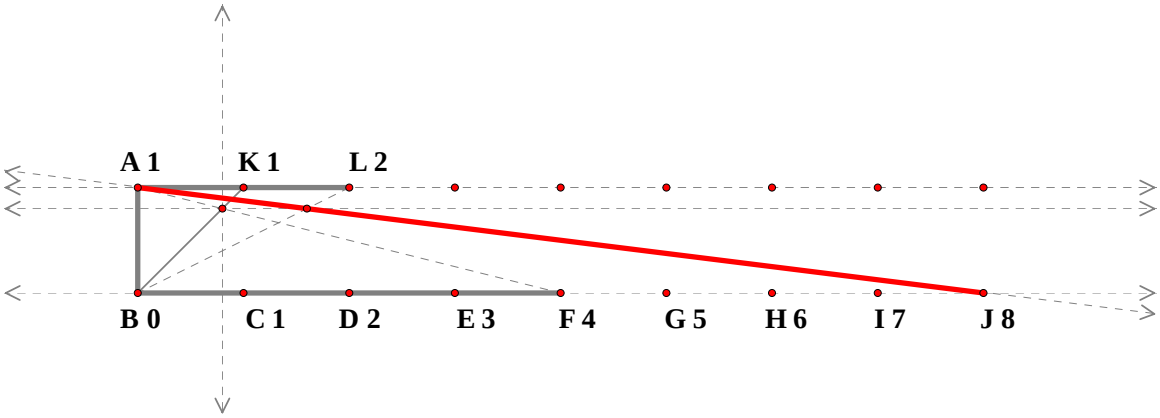
$\overline{H0J1}$ is $\frac{2}{3}$. Furthermore, I say that H0N4 is $\frac{4 \times 2}{3}$ . . .

Technique 6. Provide a ratio between numbers with two different units.



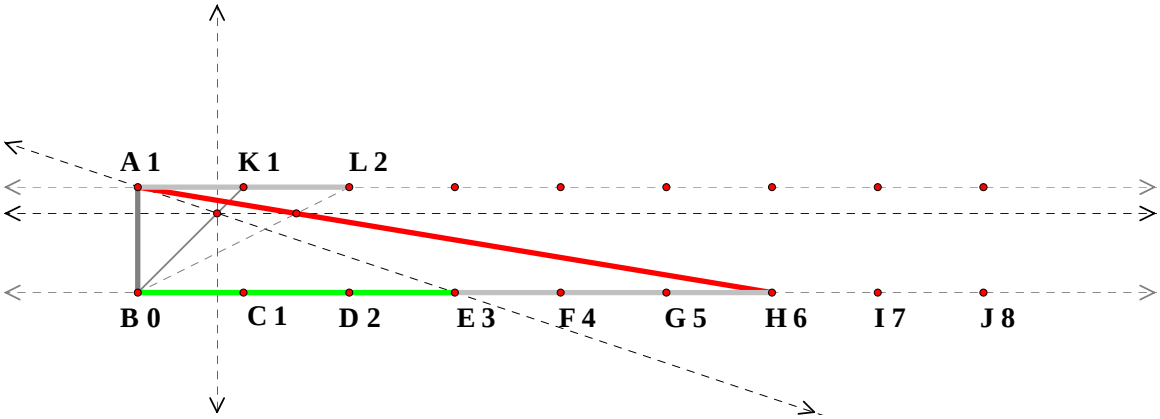
Let the numbers be 5 A and 5 B. Then 1A:1B :: 5A:5B.

Technique 7. Multiply two numbers.



With the given unit $\overline{A1B0}$ multiply 2 × 4.

Technique 8. Divide two numbers.



With the given unit $\overline{A1B0}$ divide 6 by 2.

Multiplication And Division of Lines

1. An unit is that by virtue of which each of the things that exist is called one.
Euclid's Elements

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The Basic figures in this little thing are written up in my work Threee Pieces of Paper, or The Delian Quest. This is not a formal presentation, is a presentation of craft basics.

John Clark

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Printed via import to MS Word.

Following the Yellow Brick Road

Multiplication

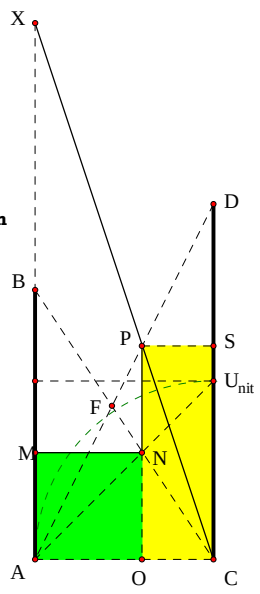
Unit = 1.00000

AB = 1.51095

CD = 1.99270

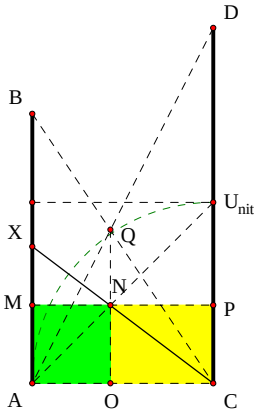
AX = 3.01087

AB·CD-AX = 0.00000



$$\frac{\text{(Area } \triangle\text{BAC)}}{\text{(Area } \triangle\text{ADC)}} - \frac{\text{(Area MNOA)}}{\text{(Area OPSC)}} = 0.00000$$

In Ancient Geometry, one calls the Green Square Numbers, and one calls the yellow Oblong Numbers. Today we just do swatches.



$$\frac{\text{(Area MAON)}}{\text{(Area NOCP)}} - \frac{\text{(Area } \triangle\text{BAC)}}{\text{(Area } \triangle\text{ADC)}} = 0.00000$$

Division

Unit = 1.00000

AB = 1.48921

CD = 1.96403

AX = 0.75824

$$\frac{\text{AB}}{\text{CD}} - \text{AX} = 0.00000$$

Introduction

Maybe I am too dogmatic, but I think one should have geometry teach one something of basic math. One should be able to add, subtract, multiply and divide with lines. These can provide proofs and constructible.

The figures can be modified in various ways to produce various results. I present a few here. The main figure is composed of the notion of common unit, and that multiplication and division works with square numbers, which is distinct from squaring a number. The square thus constructed provides the properties needed for multiplication and division.

I once read, in an Algebra book, that exponential notation had nothing to do with Geometry, that it was a pure mental abstract. What am I, then, to do with all the figures I have come up with that display the principles?

I would also like to see how the four basic operations of Math hold up in "non-Euclidean" Geometries. In fact, as part of their presentation, I think the four basic operations of mathematics should be a requirement. Perhaps by teaching the remaining two in geometry, something about reality and standards of thought will be learned.

The material in this little flyer is not new to me, it is part of four works I am currently engaged in, The Delian Quest, which is essentially completed, it needs some lipstick and a dress, Three Pieces of Paper, Eloi, and something with a puny Latin name.

Oh, and no, I have never studied geometry in an institution-I have never seen ideas survive in an institution. I have and probably will be again, be institutionalized at my own request.

Contents

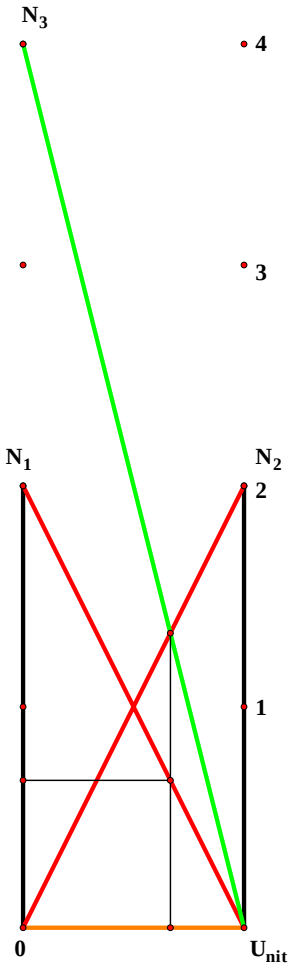
Function	Page
$(N_1 \cdot N_2) - N_3 = 0.00000$	Link to 1
$\frac{N_1}{N_2} = 1.13725$ $\frac{N_1+N_2}{N_1} = 1.87931$ $\frac{N_1+N_2}{N_2} = 2.13725$	Link to 2
$\frac{1}{N_1} - N_3 = 0.00000$	Link to 3
$\frac{N_1}{N_2^2} - N_4 = 0.00000$ $\frac{N_1}{N_2^3} - N_5 = 0.00000$	Link to 4
$2 \cdot N_1 \cdot N_2 - N_1 - N_4 = 0.00000$	Link to 5
$\frac{N_1^2}{(N_2+N_1) \cdot N_2} - N_3 = 0.00000$	Link to 6
$(2 \cdot N_1 \cdot N_2 + N_1^2 \cdot N_2) - N_3 = 0.00000$	Link to 7
$N_3^2 - \frac{BC}{BD} = 0.00000$ $N_3^3 - \frac{BC}{BE} = 0.00000$ $N_3^4 - \frac{BC}{BF} = 0.00000$	Link to 8
$\frac{N4_2}{N2_2} = 1.39420$ $\frac{N2_2}{N1_2} = 1.39420$ $\frac{N1_2}{Unit_2} = 1.39420$ $\frac{Unit_2}{N3_2} = 1.39420$	Link to 9
$\frac{N_1^2}{N_2} - N_5 = 0.00000$ $\frac{N_1^3}{N_2^2} - N_6 = 0.00000$ $\frac{N_2^2}{N_1} - N_7 = 0.00000$	Link to 10

Link to Introdution

Function	Page
$\frac{N_1^2}{N_2^2} - N_5 = 0.00000$ $N_2^2 - N_6 = 0.00000$	Link to 11
$\sqrt{2} - N_5 = 0.00000$ $\frac{\sqrt{2} \cdot N_1}{N_2} - N_6 = 0.00000$ $\frac{N_1 \cdot N_2}{\sqrt{2}} - N_7 = 0.00000$	Link to 12
$N_5 - 2^{0.75} = 0.00000$ $\left(\frac{N_1}{N_2}\right) \cdot N_5 - N_6 = 0.00000$ $\frac{N_1 \cdot N_2}{N_5} - N_7 = 0.00000$	Link to 13
$N_1^{0.5} - N_2 = 0.00000$ $N_1^{0.25} - N_3 = 0.00000$ $N_1^{0.125} - N_4 = 0.00000$	Link to 14
$\frac{N_1^{0.5}}{N_2^{0.5}} - N_3 = 0.00000$ $\frac{N_1^{0.25}}{N_2^{0.75}} - N_4 = 0.00000$ $N_1^{0.5} \cdot N_2^{1.5} - N_5 = 0.00000$	Link to 15
$\frac{N_1^2}{(N_1+N_2) \cdot N_2} - L_1 = 0.00000$ $\frac{N_1^2 \cdot N_2}{N_1+N_2} - M_1 = 0.00000$	Link to 16
$\frac{N_1^2}{N_2 \cdot (N_1+1)} - L_1 = 0.00000$ $\frac{N_1^2 \cdot N_2}{N_1+1} - M_1 = 0.00000$	Link to 17
$\frac{N_1^2}{N_2^4} - N_7 = 0.00000$ $N_2^4 - N_8 = 0.00000$ $N_2^3 - N_{25} = 0.00000$	Link to 18
$\frac{N_2^4}{N_1} - N_{26} = 0.00000$ $\frac{N_1}{N_2} - N_{27} = 0.00000$ $\frac{N_2^7}{N_1} - N_8 = 0.00000$	

Contents

Function	Page	Function	Page
$N_1 \cdot N_2 \cdot \left(\frac{1}{3}\right) - N_9 = 0.00000$ $N_1 \cdot N_2 \cdot \left(\frac{2}{3}\right) - N_{10} = 0.00000$	Link to 19		
$N_1 \cdot \left(\frac{N_1}{N_1+N_2}\right) - N_5 = 0.00000$ $N_1 \cdot \left(\frac{N_2}{N_1+N_2}\right) - N_6 = 0.00000$ $N_1 \cdot N_2 \cdot \left(\frac{N_1}{N_1+N_2}\right) - N_7 = 0.00000$	Link to 20		
$N_1^{\frac{1}{2}} - N_2 = 0.00000$ $N_1^{\frac{1}{4}} - N_3 = 0.00000$ $N_1^{\frac{1}{8}} - N_4 = 0.00000$	Link to 21		
$N_1^{\frac{8}{8}} - N_1 = 0.00000$ $N_1^{\frac{7}{8}} - N_2 = 0.00000$ $N_1^{\frac{6}{8}} - N_3 = 0.00000$	Link to 22		
$N_1^{\frac{5}{8}} - N_4 = 0.00000$ $N_1^{\frac{4}{8}} - N_5 = 0.00000$ $N_1^{\frac{3}{8}} - N_6 = 0.00000$			
$N_1^{\frac{2}{8}} - N_7 = 0.00000$ $N_1^{\frac{1}{8}} - N_8 = 0.00000$ $N_1^{\frac{0}{8}} - N_0 = 0.00000$			



$N_1 = 2.00000$

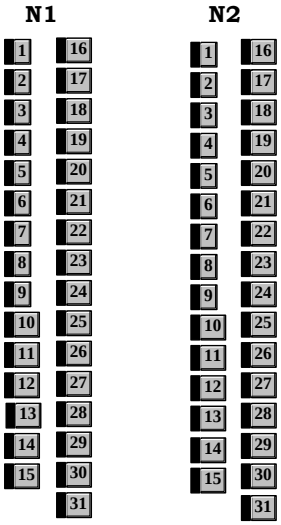
$N_2 = 2.00000$

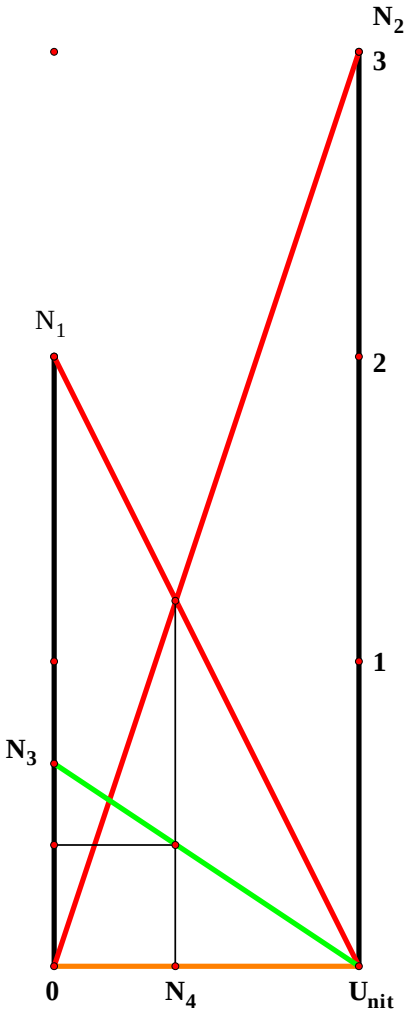
$N_1 \cdot N_2 = 4.00000$

$(N_1 \cdot N_2) - N_3 = 0.00000$

$N_3 = 4.00000$

Multiply N1 by N2





$N_1 = 2.00000$

$N_2 = 3.00000$

$\frac{N_1}{N_2} = 0.66667$

$N_3 = 0.66667$

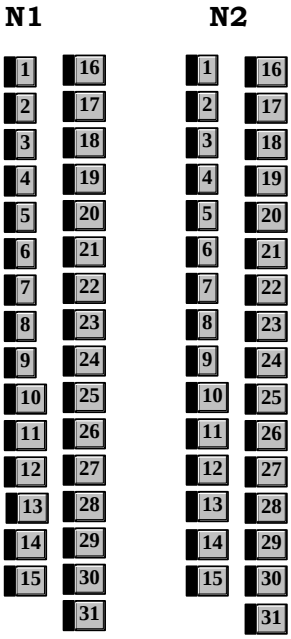
$\frac{U_{nit}}{0N_4} = 2.50000$

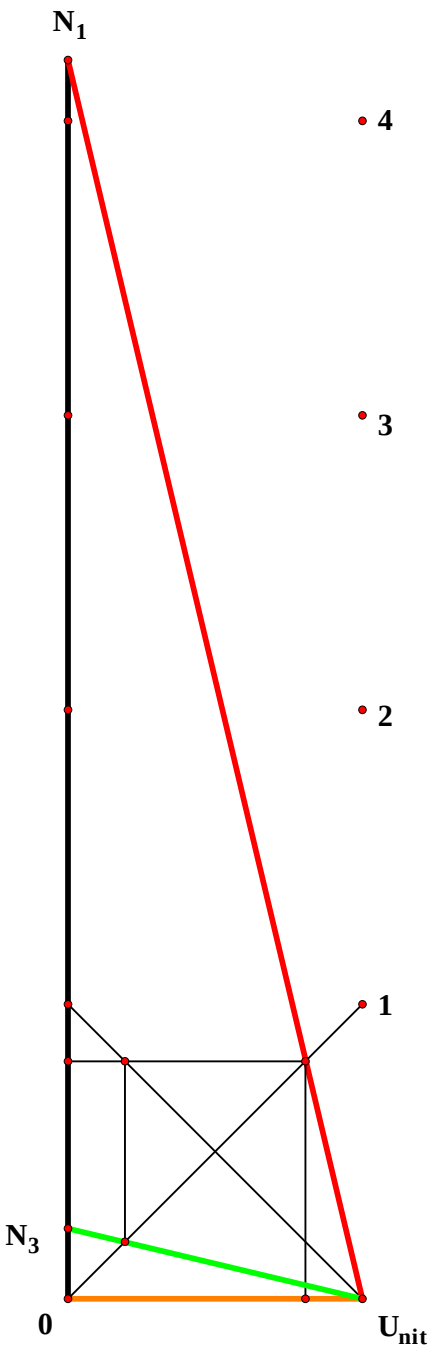
$\frac{N_1+N_2}{N_1} = 2.50000$

$\frac{U_{nit}}{U_{nit}N_4} = 1.66667$

$\frac{N_1+N_2}{N_2} = 1.66667$

Divide
N1 by N2





Find the Recprocal N1

$N_1 = 4.20930$

$\frac{1}{N_1} = 0.23757$

$N_3 = 0.23757$

$\frac{1}{N_1} - N_3 = 0.00000$

N1

1	16
2	17
3	18
4	19
5	20
6	21
7	22
8	23
9	24
10	25
11	26
12	27
13	28
14	29
15	30
	31

$N_1 = 3.00000$

$N_2 = 2.00000$

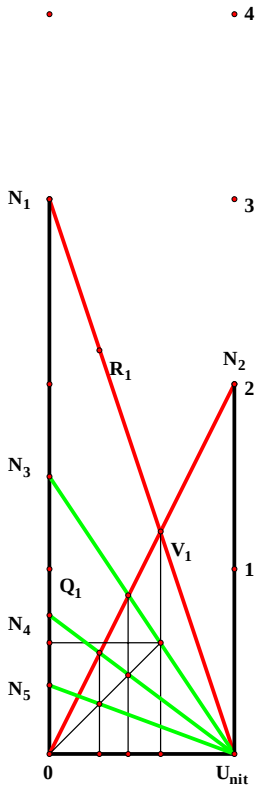
$\frac{N_1}{N_2} = 1.50000$

$N_3 = 1.50000$

$N_4 = 0.75000$ $\quad \frac{N_1}{N_2^2} - N_4 = 0.00000$

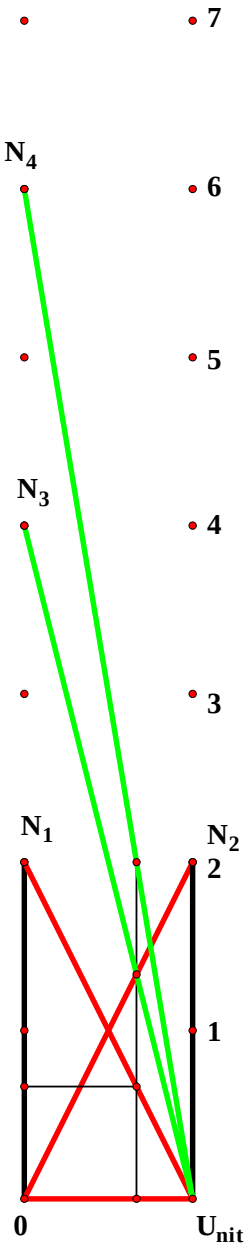
$N_5 = 0.37500$ $\quad \frac{N_1}{N_2^3} - N_5 = 0.00000$

etc.



Divide N1 by a Power of N2

	N1	N2
1	16	16
2	17	17
3	18	18
4	19	19
5	20	20
6	21	21
7	22	22
8	23	23
9	24	24
10	25	25
11	26	26
12	27	27
13	28	28
14	29	29
15	30	30
	31	31



$N_1 = 2.00000$

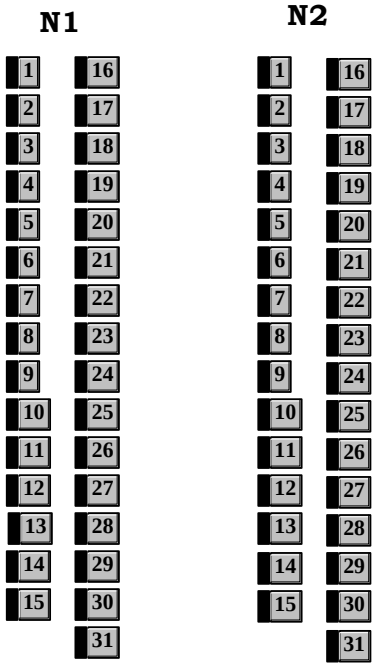
$N_2 = 2.00000$

$N_1 \cdot N_2 = 4.00000$

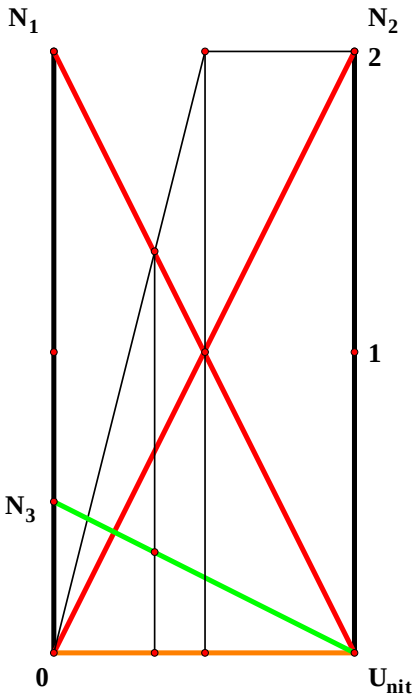
$N_3 = 4.00000$

$N_4 = 6.00000$

$2 \cdot N_1 \cdot N_2 - N_1 - N_4 = 0.00000$



3



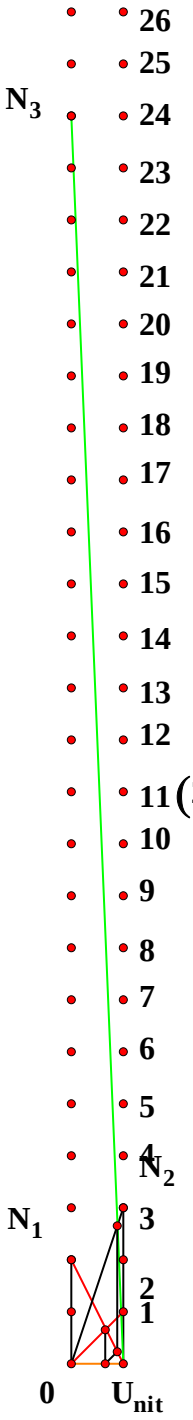
$N_1 = 2.00000$

$N_2 = 2.00000$

$N_3 = 0.50000$

$$\frac{N_1^2}{(N_2+N_1)\cdot N_2} - N_3 = 0.00000$$

N1		N2	
1	16	1	16
2	17	2	17
3	18	3	18
4	19	4	19
5	20	5	20
6	21	6	21
7	22	7	22
8	23	8	23
9	24	9	24
10	25	10	25
11	26	11	26
12	27	12	27
13	28	13	28
14	29	14	29
15	30	15	30
	31		31

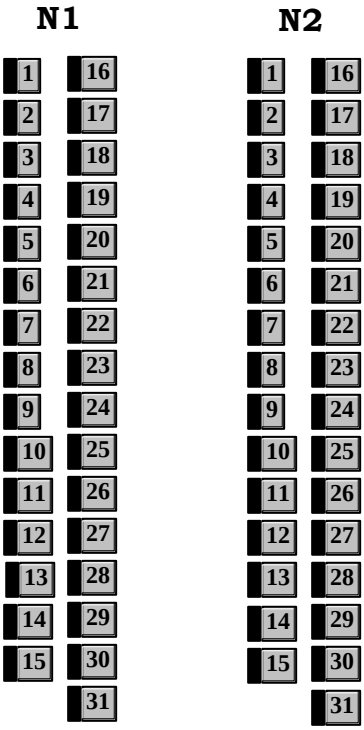


$N_1 = 2.00000$

$N_2 = 3.00000$

$N_3 = 24.00000$

$(2 \cdot N_1 \cdot N_2 + N_1^2 \cdot N_2) - N_3 = 0.00000$



$\frac{BC}{BV_1} = 0.81650$ $\quad N_3^{-0.5} = 0.81650$

$N_3^{0} = 1.00000$

$\frac{BC}{BU_1} = 1.22474$ $\quad N_3^{0.5} = 1.22474$

$\frac{BC}{BP_1} = 1.50000$

$\frac{BC}{BR_1} = 2.25000$ $\quad N_3^{2} - \frac{BC}{BR_1} = 0.00000$

$\frac{BC}{BS_1} = 3.37500$ $\quad N_3^{3} - \frac{BC}{BS_1} = 0.00000$

$\frac{BC}{BT_1} = 5.06250$ $\quad N_3^{4} - \frac{BC}{BT_1} = 0.00000$

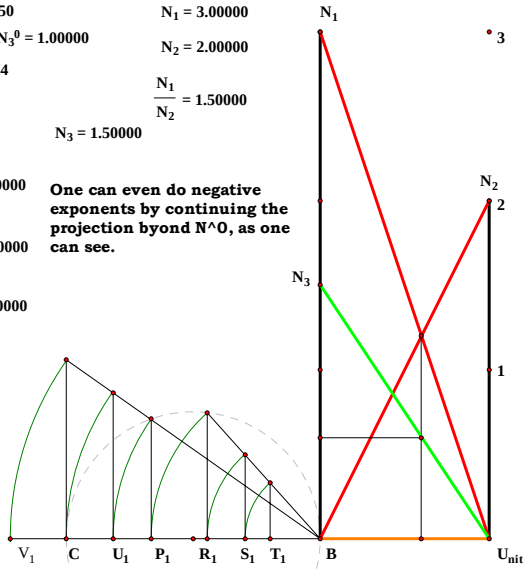
$N_1 = 3.00000$

$N_2 = 2.00000$

$\frac{N_1}{N_2} = 1.50000$

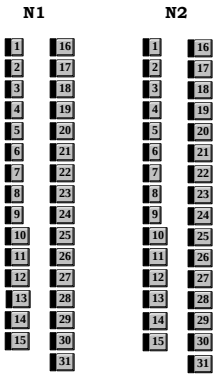
$N_3 = 1.50000$

One can even do negative exponents by continuing the projection beyond N^0, as one can see.



Adding a figure to a figure.

I tossed this together, so it is not perfect--it just looks good



How to find a Proportional Unit for a given pair of Magnitudes

$Unit_2 = 1.00000$

$N1_2 = 1.39420$

$N2_2 = 1.94380$

$N3_2 = 0.71726$

$N4_2 = 2.71004$

$\frac{N1_2}{N2_2} - N3_2 = 0.00000$

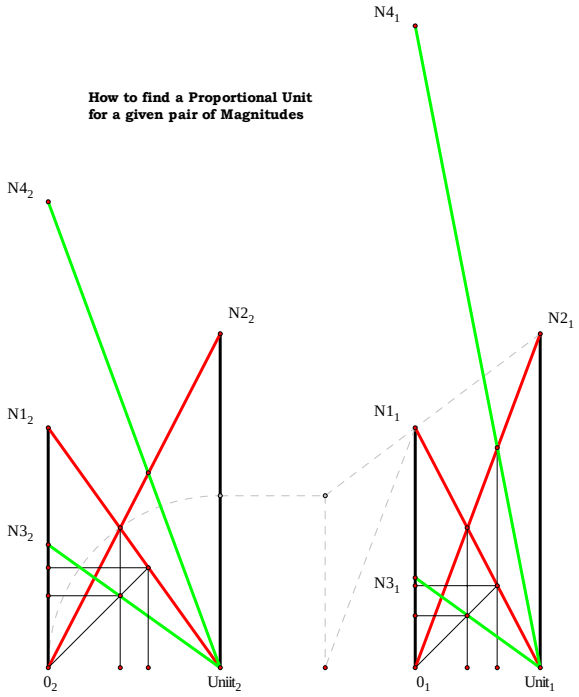
$N1_2 \cdot N2_2 - N4_2 = 0.00000$

$\frac{N4_2}{N2_2} = 1.39420$

$\frac{N2_2}{N1_2} = 1.39420$

$\frac{N1_2}{Unit_2} = 1.39420$

$\frac{Unit_2}{N3_2} = 1.39420$



$Unit_1 = 1.00000$

$N1_1 = 1.91861$

$N2_1 = 2.67492$

$N3_1 = 0.71726$

$N4_1 = 5.13213$

$\frac{N1_1}{N2_1} - N3_1 = 0.00000$

$N1_1 \cdot N2_1 - N4_1 = 0.00000$

$\frac{N4_1}{N2_1} = 1.91861$

$\frac{N2_1}{N1_1} = 1.39420$

$\frac{N1_1}{Unit_1} = 1.91861$

$\frac{Unit_1}{N3_1} = 1.39420$

Unit = 1.00000

$N_1 = 2.00000$

$N_2 = 3.00000$

$N_3 = 0.66667$

$N_4 = 6.00000$

$N_5 = 1.33333$

$N_6 = 0.88889$

$N_7 = 4.50000$

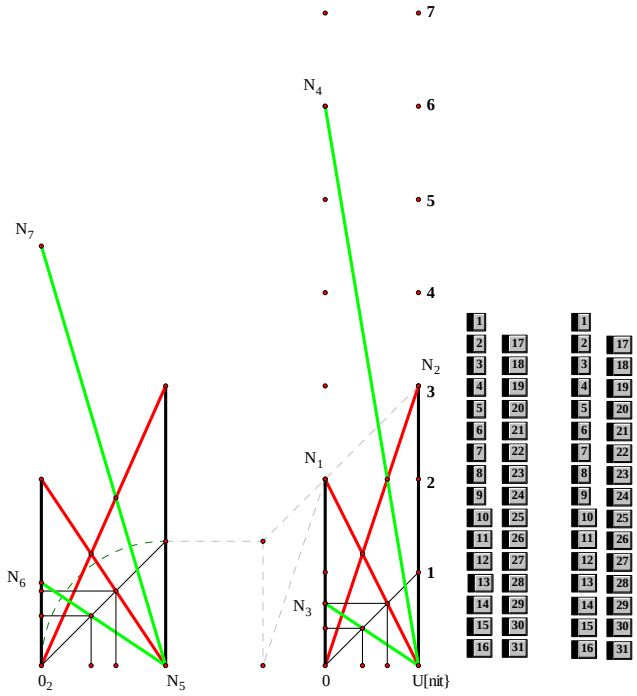
$$\frac{N_1}{N_2} - N_3 = 0.00000$$

$$N_1 \cdot N_2 - N_4 = 0.00000$$

$$\frac{N_1^2}{N_2} - N_5 = 0.00000$$

$$\frac{N_1^3}{N_2^2} - N_6 = 0.00000$$

$$\frac{N_2^2}{N_1} - N_7 = 0.00000$$



Unit = 1.00000

N_1 = 2.00000

N_2 = 2.30952

N_3 = 0.86598

N_4 = 4.61905

N_5 = 0.74992

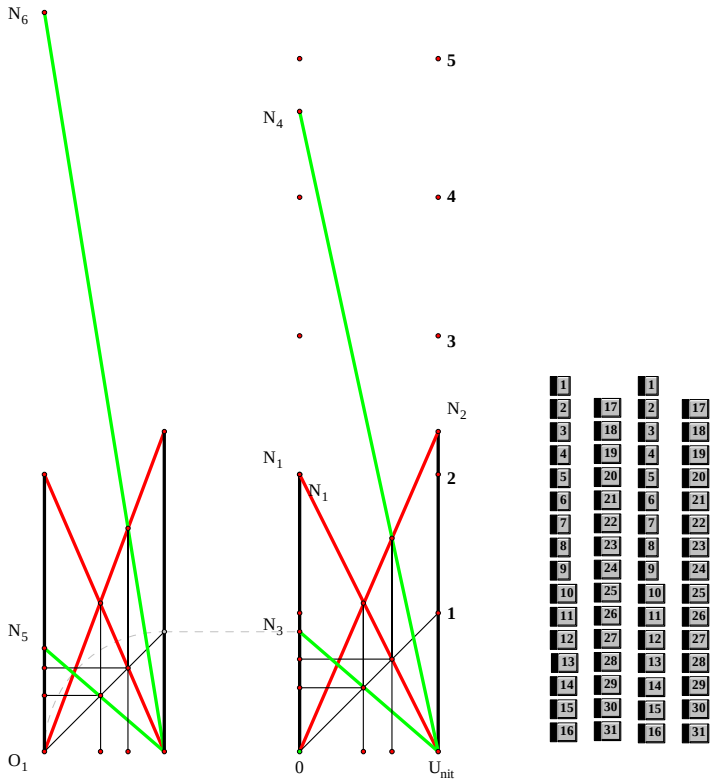
N_6 = 5.33390

$\frac{N_1}{N_2} - N_3 = 0.00000$

$N_1 \cdot N_2 - N_4 = 0.00000$

$\frac{N_1^2}{N_2^2} - N_5 = 0.00000$

$N_2^2 - N_6 = 0.00000$



Unit = 1.00000

N_1 = 2.00000

N_2 = 2.43939

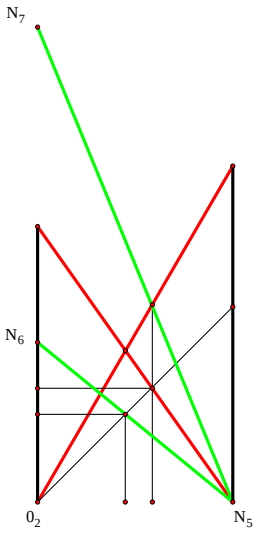
N_3 = 0.81988 $\frac{N_1}{N_2}-N_3 = 0.00000$

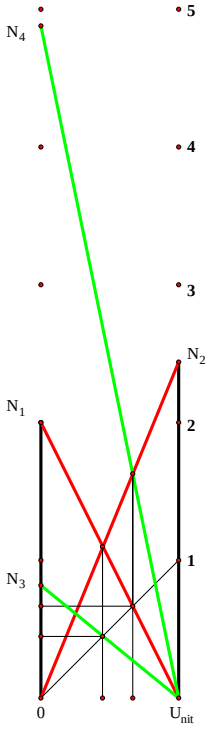
N_4 = 4.87879 $N_1 \cdot N_2 - N_4 = 0.00000$

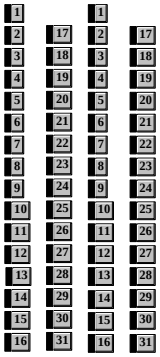
N_5 = 1.41421 $\sqrt{2}-N_5 = 0.00000$

N_6 = 1.15948 $\frac{\sqrt{2}\cdot N_1}{N_2}-N_6 = 0.00000$

N_7 = 3.44982 $\frac{N_1 \cdot N_2}{\sqrt{2}}-N_7 = 0.00000$







Unit = 1.00000

N_1 = 2.00000

N_2 = 2.00000 $\quad \frac{N_1}{N_2} - N_3 = 0.00000$

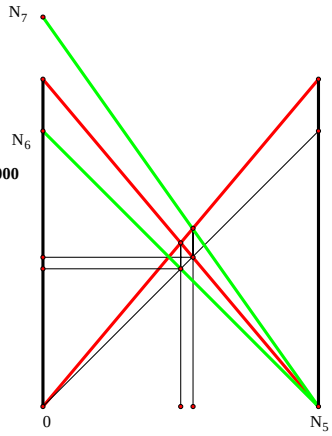
N_3 = 1.00000

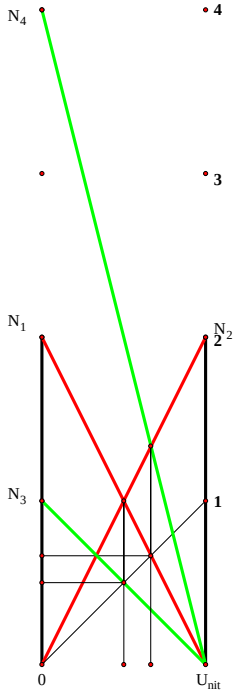
N_4 = 4.00000 $\quad N_1 \cdot N_2 - N_4 = 0.00000$

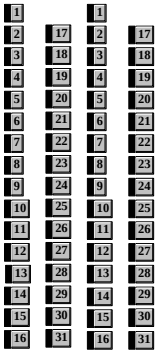
N_5 = 1.68179 $\quad N_5 - 2^{0.75} = 0.00000$

N_6 = 1.68179 $\quad \left(\frac{N_1}{N_2}\right) \cdot N_5 - N_6 = 0.00000$

N_7 = 2.37841 $\quad \frac{N_1 \cdot N_2}{N_5} - N_7 = 0.00000$







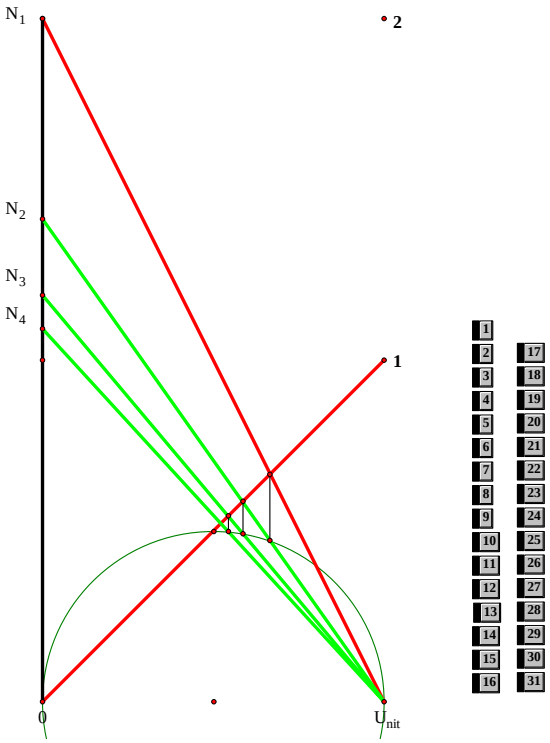
Unit = 1.00000

N_1 = 2.00000

N_2 = 1.41421 **$N_1^{0.5}$-N_2 = 0.00000**

N_3 = 1.18921 **$N_1^{0.25}$-N_3 = 0.00000**

N_4 = 1.09051 **$N_1^{0.125}$-N_4 = 0.00000**



Unit = 1.00000

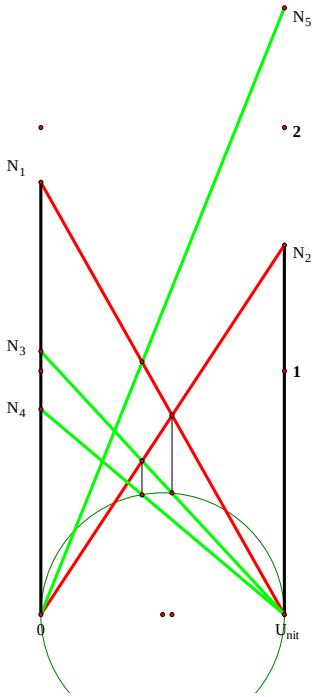
N_1 = 1.77542

N_2 = 1.51695

N_3 = 1.08185 $\quad \frac{N_1^{0.5}}{N_2^{0.5}} - N_3 = 0.00000$

N_4 = 0.84450 $\quad \frac{N_1^{0.25}}{N_2^{0.75}} - N_4 = 0.00000$

N_5 = 2.48947 $\quad N_1^{0.5} \cdot N_2^{1.5} - N_5 = 0.00000$



1	17	1	17
2	18	2	18
3	19	3	19
4	20	4	20
5	21	5	21
6	22	6	22
7	23	7	23
8	24	8	24
9	25	9	25
10	26	10	26
11	27	11	27
12	28	12	28
13	29	13	29
14	30	14	30
15	31	15	31
16		16	

Unit = 1.00000

N_1 = 1.00000

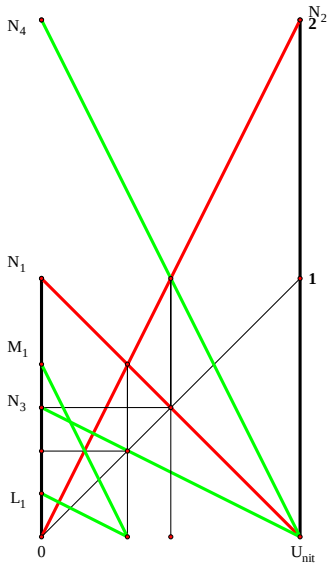
N_2 = 2.00000 $\frac{N_1}{N_2}-N_3 = 0.00000$

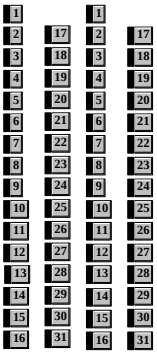
N_3 = 0.50000

N_4 = 2.00000 $N_1 \cdot N_2 - N_4 = 0.00000$

L_1 = 0.16667 $\frac{N_1^2}{(N_1+N_2)\cdot N_2}-L_1 = 0.00000$

M_1 = 0.66667 $\frac{N_1^2 \cdot N_2}{N_1+N_2}-M_1 = 0.00000$





Unit = 1.00000

N_1 = 2.00000

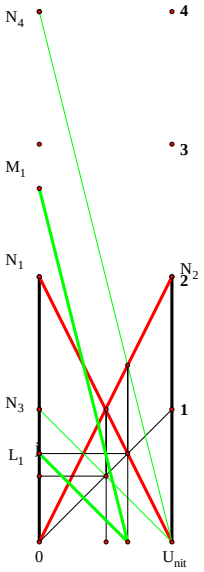
N_2 = 2.00000 $\frac{N_1}{N_2}$**-N_3 = 0.00000**

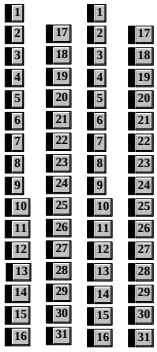
N_3 = 1.00000

N_4 = 4.00000 **$N_1 \cdot N_2 - N_4 = 0.00000$**

L_1 = 0.66667 $\frac{N_1^2}{N_2 \cdot (N_1+1)}$**-$L_1$ = 0.00000**

M_1 = 2.66667 $\frac{N_1^2 \cdot N_2}{N_1+1}$**-$M_1$ = 0.00000**





$U_1 = 1.00000$

$N_1 = 2.00000$

$N_2 = 2.00000$

$N_3 = 1.00000$ $\quad \frac{N_1}{N_2} = 1.00000$

$N_4 = 4.00000$ $\quad N_1 \cdot N_2 - N_4 = 0.00000$

$U[1] / U_2 = 0.25000$

$N_5 = 2.00000$

$N_6 = 2.00000$

$N_7 = 0.25000$ $\quad \frac{N_1^2}{N_2^4} - N_7 = 0.00000$

$N_8 = 16.00000$ $\quad N_2^4 - N_8 = 0.00000$

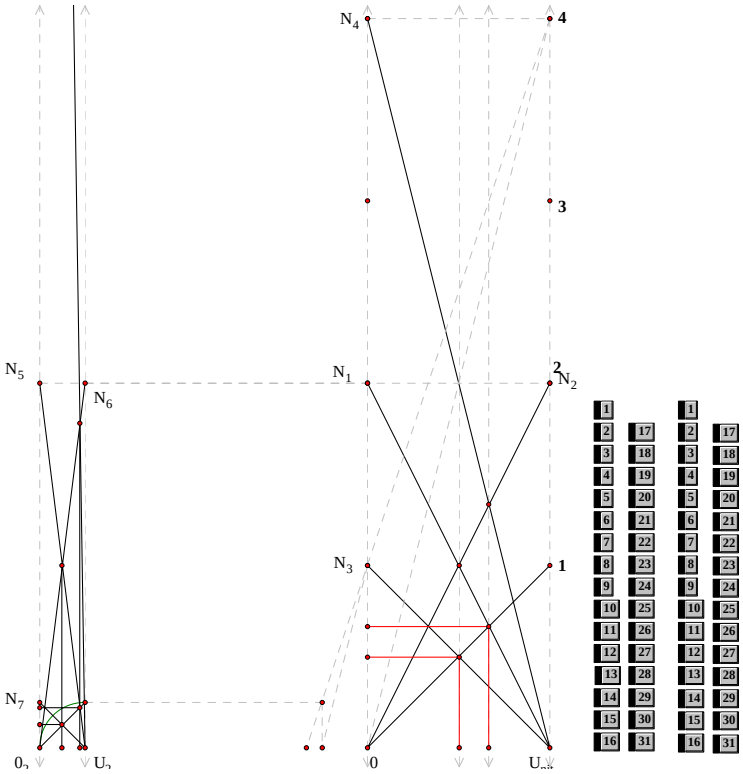
$U_2 = 1.00000$

$N_{25} = 8.00000$ $\quad N_2^3 - N_{25} = 0.00000$

$N_{26} = 8.00000$ $\quad \frac{N_2^4}{N_1} - N_{26} = 0.00000$

$N_{27} = 1.00000$ $\quad \frac{N_1}{N_2} - N_{27} = 0.00000$

$N_8 = 64.00000$ $\quad \frac{N_2^7}{N_1} - N_8 = 0.00000$



Unit = 1.00000

N_1 = 1.72159

N_2 = 2.12500

N_3 = 0.81016

N_4 = 3.65838

N_5 = 0.57386

N_6 = 1.14773

N_7 = 0.70833

N_8 = 1.41667

N_9 = 1.21946

N_{10} = 2.43892

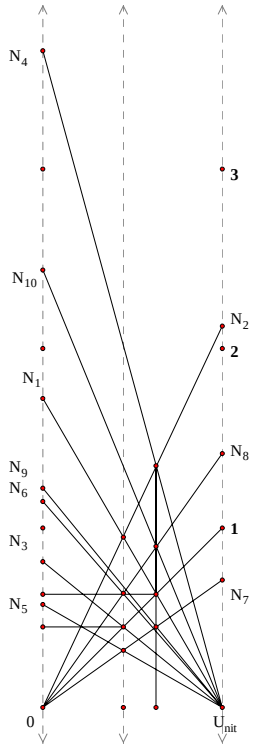
$$\frac{N_1}{N_2} - N_3 = 0.00000$$

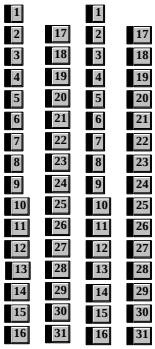
$$N_1 \cdot N_2 - N_4 = 0.00000$$

$$\frac{N_1}{N_2} = 0.81016$$

$$N_1 \cdot N_2 \cdot \left(\frac{1}{3}\right) - N_9 = 0.00000$$

$$N_1 \cdot N_2 \cdot \left(\frac{2}{3}\right) - N_{10} = 0.00000$$





Unit = 1.00000

N_1 = 1.37056

N_2 = 1.73096

N_3 = 0.79179 $\frac{N_1}{N_2} = 0.79179$

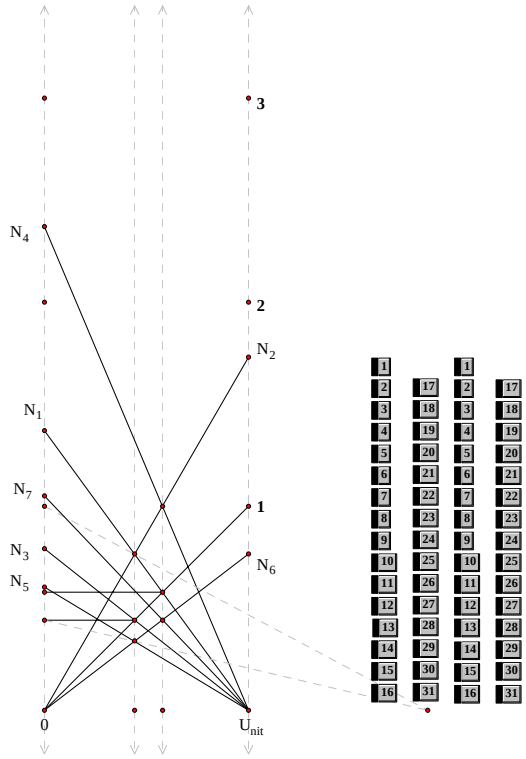
N_4 = 2.37239 $N_1 \cdot N_2 = 2.37239$

$\frac{N_1}{N_2} = 0.79179$

N_5 = 0.60565 $N_1 \cdot \left(\frac{N_1}{N_1+N_2} \right) - N_5 = 0.00000$

N_6 = 0.76491 $N_1 \cdot \left(\frac{N_2}{N_1+N_2} \right) - N_6 = 0.00000$

N_7 = 1.04835 $N_1 \cdot N_2 \cdot \left(\frac{N_1}{N_1+N_2} \right) - N_7 = 0.00000$



Unit = 1.00000

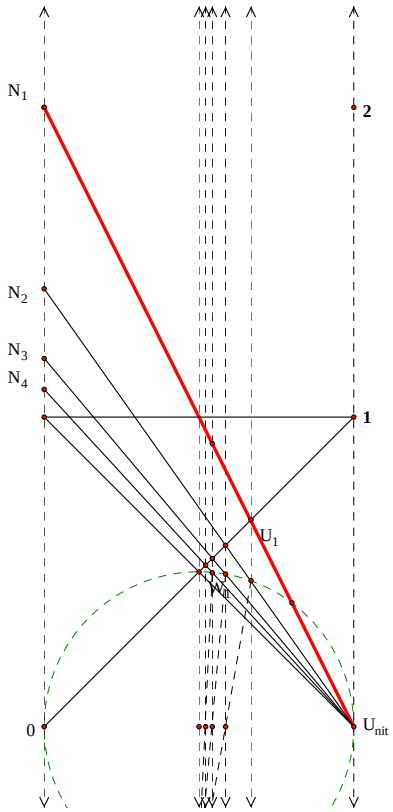
N_1 = 2.00000

N_2 = 1.41421 $\quad N_1^{\frac{1}{2}} - N_2 = 0.00000$

N_3 = 1.18921 $\quad N_1^{\frac{1}{4}} - N_3 = 0.00000$

N_4 = 1.09051 $\quad N_1^{\frac{1}{8}} - N_4 = 0.00000$

etc.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Unit = 1.00000

Eight root series.

One can project as long as they like.

$N_1 = 2.00000$ $N_1^{\frac{8}{8}} - N_1 = 0.00000$

$N_2 = 1.83401$ $N_1^{\frac{7}{8}} - N_2 = 0.00000$

$N_3 = 1.68179$ $N_1^{\frac{6}{8}} - N_3 = 0.00000$

$N_4 = 1.54221$ $N_1^{\frac{5}{8}} - N_4 = 0.00000$

$N_5 = 1.41421$ $N_1^{\frac{4}{8}} - N_5 = 0.00000$

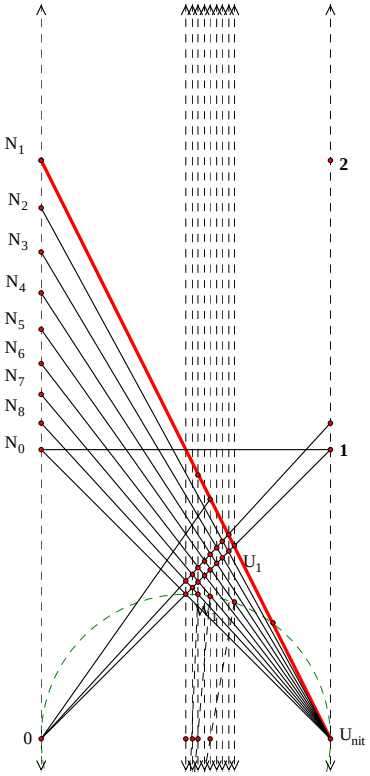
$N_6 = 1.29684$ $N_1^{\frac{3}{8}} - N_6 = 0.00000$

$N_7 = 1.18921$ $N_1^{\frac{2}{8}} - N_7 = 0.00000$

$N_8 = 1.09051$ $N_1^{\frac{1}{8}} - N_8 = 0.00000$

$N_0 = 1.00000$ $N_1^{\frac{0}{8}} - N_0 = 0.00000$

etc.



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The computational speed by straight edge and compass outdoes long hand by factors. The computational accuracy exceeds that of any binary computer. The understanding as to what numbers mean cannot be outdone. Yet, instead of improving Euclid, they made a mess of it.

What led me to this solution was not Euclid, it was my own geometry play-especially doing the formula's and solution to a power line In order to solve for the power line, I actually had to know how to divide a square by a line. That coupled with the feeling that one should know the basic mathematical operations in geometry, as a starter made me break down and simply do it.

Geometry is still undefined. It is undefined because, as we know, a set can be constructed in only two ways, by enumeration and by definition. By saying that Euclidean Geometry only uses two tools, the straight edge and compass, we have enumerated its set. To define it, one would have to say, Geometry is that language by which we speak where there is one, and only one difference between two points.

This change not only defines Euclidean Geometry, but we find that it has been short changed for a long time. A straight edge does indeed give us one and only one difference between two points, and so does a compass, these are the unit and universe of discourse in the subject. However, there is yet one more tool, that tool that gives us every ratio in-between the unit and the universe, the ellipes. There is indeed one and only one difference between the two points called the foci of an ellipse.

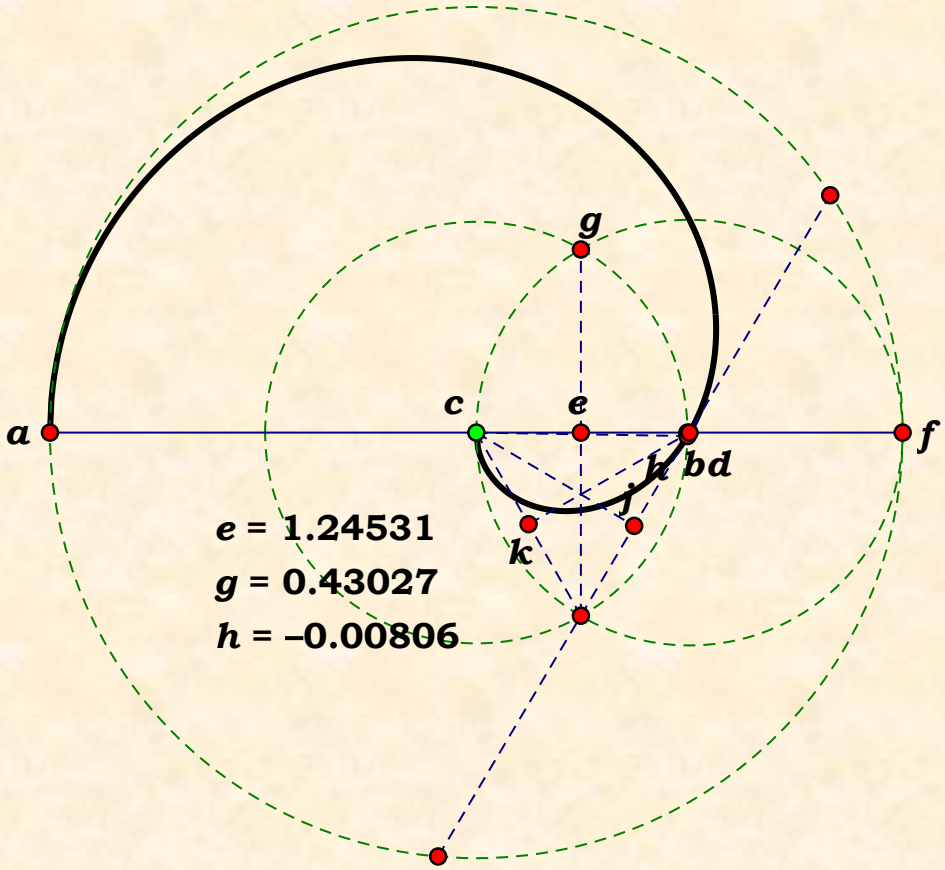
If one can accept that, one can then understand my solution to the Delian Problem. A figure that gives one every aspect of an ellipse and one simply has to lay it down. Accepting that definition also takes something that is implied in Euclidean Geometry and makes it explicit, the ability to add, to do the math.

I hope you have fun.

Logical Operators

$bh = -0.00806$

$$\frac{bh}{\sqrt{bh^2}} = -1.00000$$



Logic

Logic is the Art of Names. Names, however, in of themselves, have no meaning, thus, where is the Art?

The answer to the riddle is simple, relation to self is inadmissible, or again, the Law of Identity. Art is how we do our own work. So, Logic is Art with Names.

Name usage is divided between the Particular and the Universal. Descriptions are in the class of particulars, while Definitions reside in the class of universals. As Art with Names is aimed at predicative behavior, this means that we like to denote the word Logic as meaning the use of words for Definitions, as Plato did. Logic, is then the Art of learning how to take particular statements in order to construct a universal definition, or as Plato described it, the ability to see the one in the many and the many in the one. This is how it is done, as Plato described.

We first write up our particular example, step by step, until we reach the conclusion. This gives us an answer to that particular, which also transcribes into a quite workable universal definition. However, if one studies the chain of reasoning, one will find that many of the equations fail to work even though the final equation works perfectly. This fact has created a lot of mysticism in mathematics, such as imaginary numbers, or claims that certain figures have various “cases” which require each of them, some new proof.

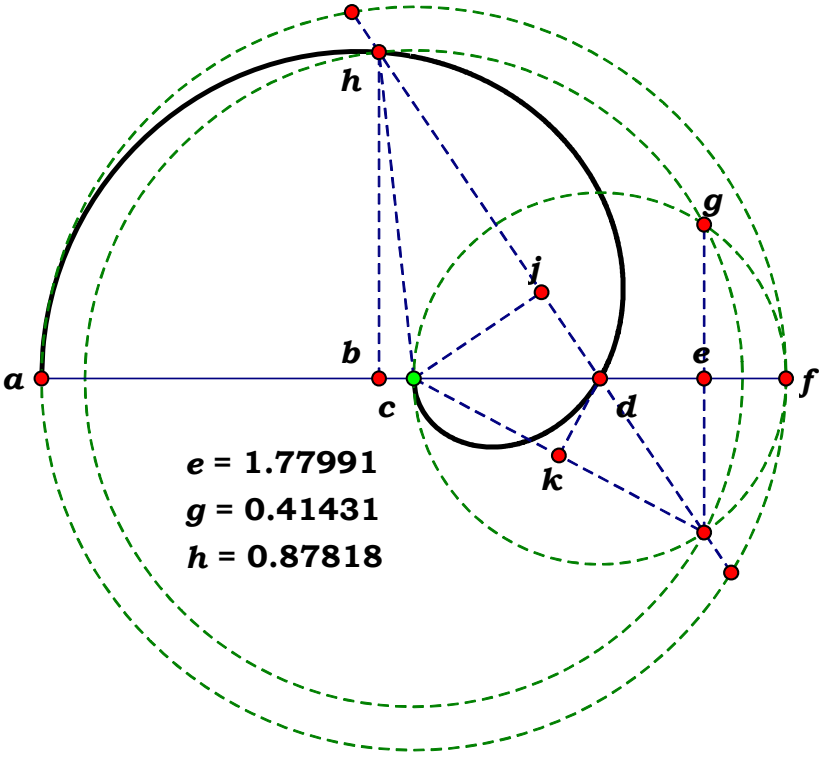
Decision making starts off, as Plato noted, with the ability to compare two things for equality. If these things are not equal, then one is less than or greater than the other. This is where logical operators come in.

The logical operator is very simple. It is expressed mathematically as, $\frac{a}{\sqrt{a^2}} = 1$ or -1, i.e., greater than or less than 0, or equal. a, can be, however any equation, such that every equation can become a logical operator. This means that where, on a so-called number line, they switch from 1 to -1, is determined by the operator, itself. We learn to build these logical operators by using the geometric figure to show us where they are needed, and the figure shows us how to write them.

In the *Basic Analog Mathematics Sample Dictionary*, I show how to make logical operators from any equation, however, I did not teach much, if anything, on how to use them. Logical operators, then, teach us how to take in the moment descriptions, and turn them into functional predictive and definitive equations.

I will start off with a figure which resembles the Fibonacci sequence.

062725 Spiral



Given:

$ac := 1 \quad ae := 1.77991$

Descriptions:

$cf := ac \quad cd := \frac{cf}{2} \quad ce := ae - ac$

$ad := ac + cd \quad de := (ae - ad)$

$dj := de \quad dh := cd + 2 \cdot dj$

$ef := cf - ce \quad bd := \frac{de \cdot dh}{cd}$

$eg := \sqrt{ce \cdot ef} \quad bh := \frac{eg \cdot bd}{de}$

$eg = 0.41431 \quad bh = 0.87818$

$(4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2} = 0.87818$

$\sqrt{3 \cdot e - e^2 - 2} = 0.41431$

$\left((4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2}\right) - h = 0.00000$

$\sqrt{3 \cdot e - e^2 - 2} - g = 0.00000$

Definitions:

$cf - 1 = 0 \quad cd - \frac{1}{2} = 0 \quad ce - (ae - 1) = 0$

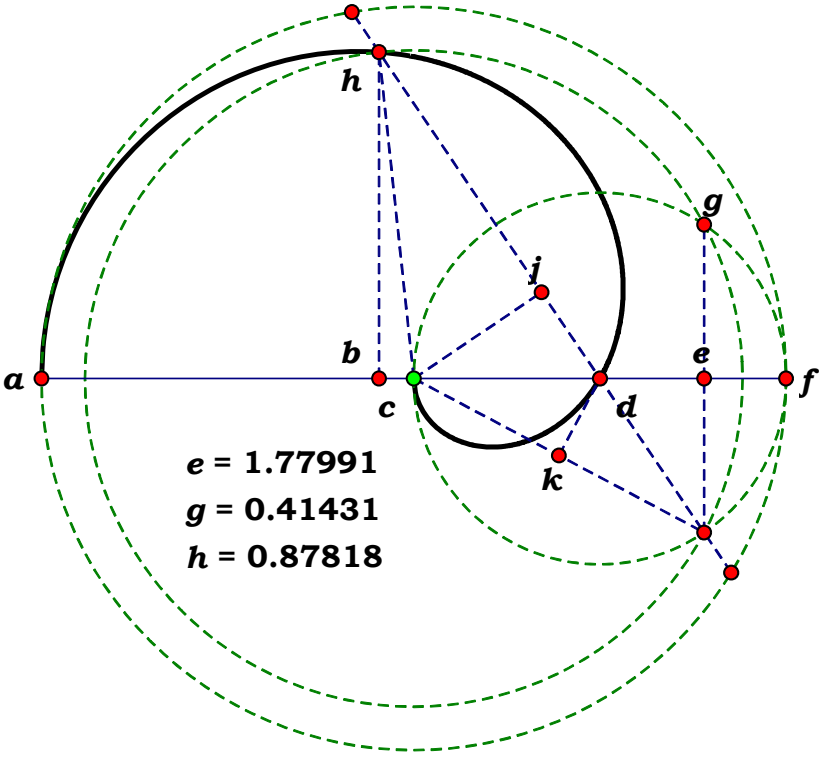
$ad - \frac{3}{2} = 0 \quad de - \left(ae - \frac{3}{2}\right) = 0 \quad dj - \left(ae - \frac{3}{2}\right) = 0$

$dh - \left(\frac{4 \cdot ae - 5}{2}\right) = 0 \quad ef - (2 - ae) = 0$

$bd - \frac{(2 \cdot ae - 3) \cdot (4 \cdot ae - 5)}{2} = 0 \quad eg := \sqrt{(ae - 1) \cdot (2 - ae)}$

$bh := (4 \cdot ae - 5) \cdot \sqrt{3 \cdot ae - ae^2 - 2}$

062725 Spiral



Given:

$ac := 1 \quad ae := 1.77991$

Descriptions:

$cf := ac \quad cd := \frac{cf}{2} \quad ce := ae - ac$

$ad := ac + cd \quad de := (ae - ad)$

$dj := de \quad dh := cd + 2 \cdot dj$

$ef := cf - ce \quad bd := \frac{de \cdot dh}{cd}$

$eg := \sqrt{ce \cdot ef} \quad bh := \frac{eg \cdot bd}{de}$

$eg = 0.41431 \quad bh = 0.87818$

$(4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2} = 0.87818$

$\sqrt{3 \cdot e - e^2 - 2} = 0.41431$

$\left((4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2}\right) - h = 0.00000$

$\sqrt{3 \cdot e - e^2 - 2} - g = 0.00000$

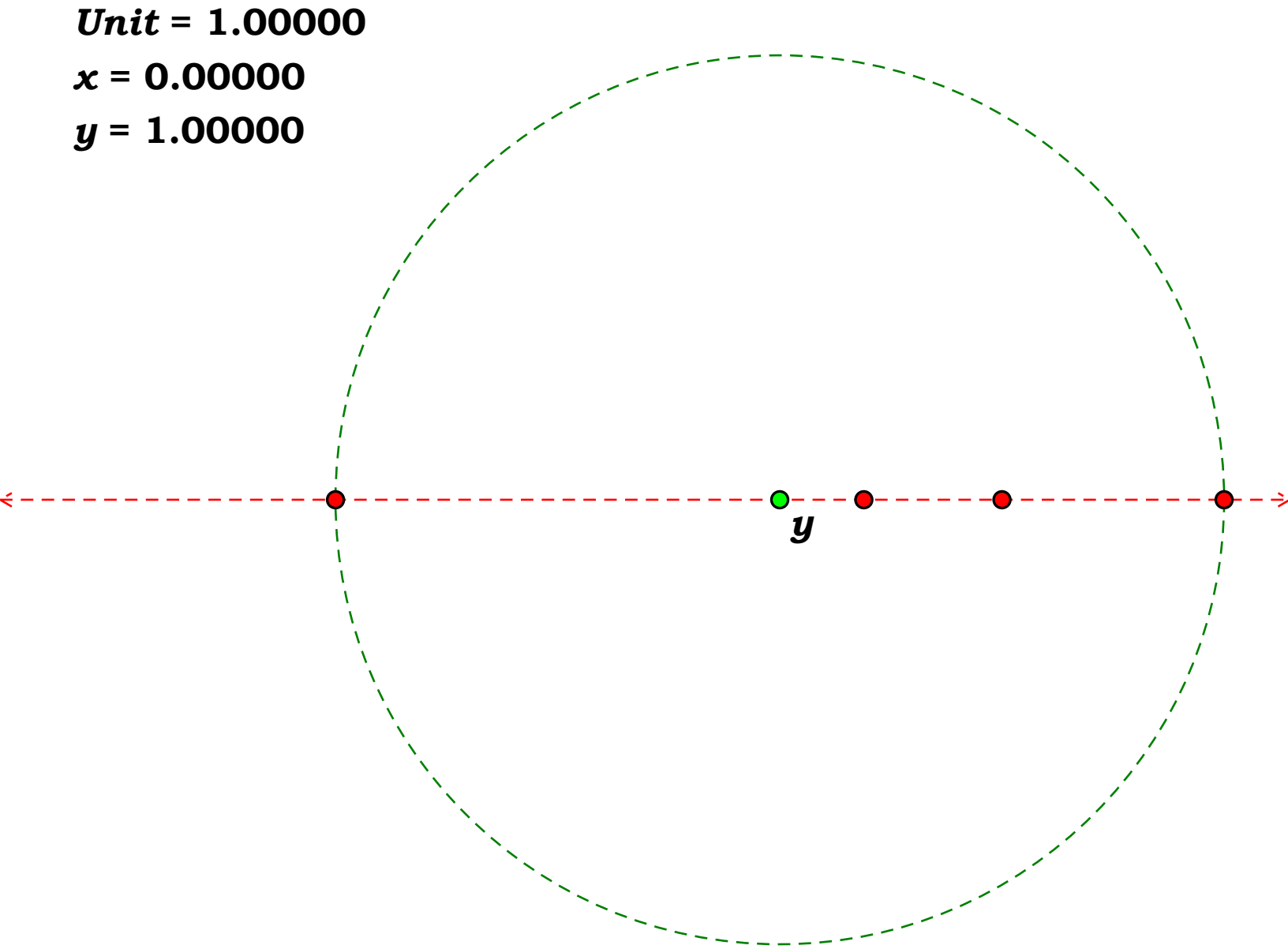
Definitions:

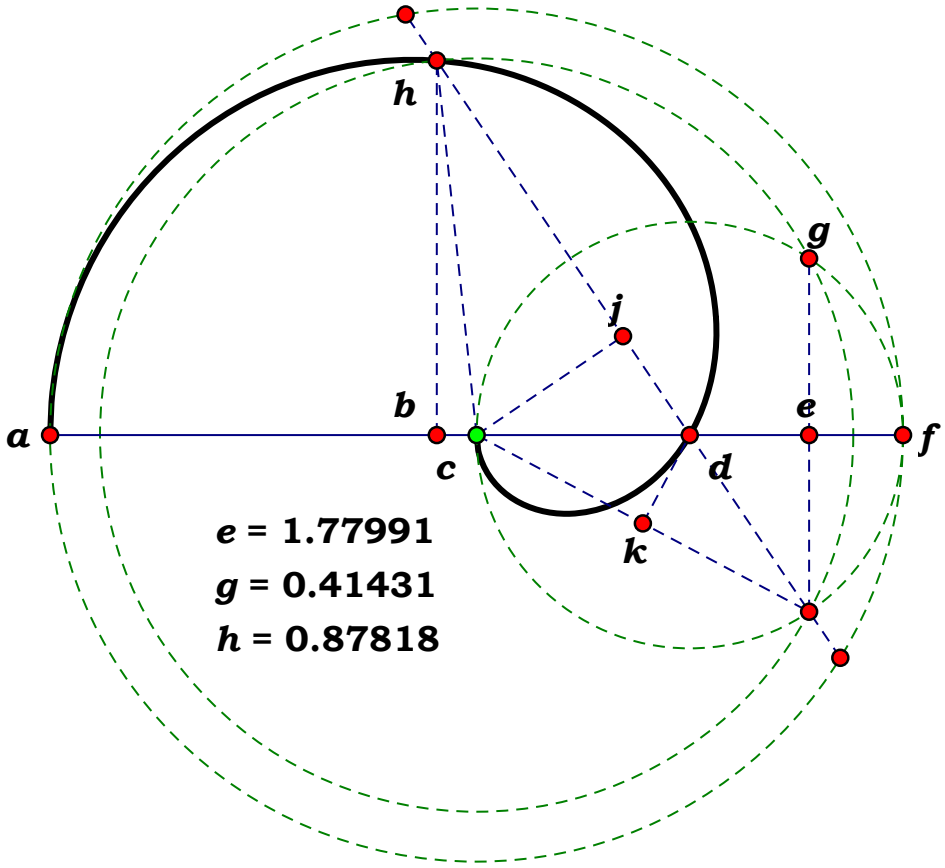
$cf - ac = 0 \quad cd - \frac{1}{2} = 0 \quad ce - (ae - 1) = 0 \quad ad - \frac{3}{2} = 0 \quad de - \frac{(3 - 2 \cdot ae)^2}{2 \cdot \sqrt{(2 \cdot ae - 3)^2}} = 0$

$dj - \frac{(3 - 2 \cdot ae)^2}{2 \cdot \sqrt{(2 \cdot ae - 3)^2}} = 0 \quad dh - \frac{\sqrt{(4 \cdot ae - 5)^2}}{2} = 0 \quad ef - (2 - ae) = 0$

$bd - \frac{\sqrt{[(2 \cdot ae - 3) \cdot (4 \cdot ae - 5)]^2}}{2} = 0 \quad eg - \sqrt{3 \cdot ae - ae^2 - 2} = 0$

$bh - (4 \cdot ae - 5) \cdot \sqrt{3 \cdot ae - ae^2 - 2} = 0 \quad \frac{bh}{eg} - (4 \cdot ae - 5) = 0$


Unit = 1.00000
x = 0.00000
y = 1.00000
y



$(4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2} = 0.87818$

$\sqrt{3 \cdot e - e^2 - 2} = 0.41431$

$\left((4 \cdot e - 5) \cdot \sqrt{3 \cdot e - e^2 - 2}\right) - h = 0.00000$

$\sqrt{3 \cdot e - e^2 - 2} - g = 0.00000$

$$de - \left(ae - \frac{3}{2}\right) = 0.00000$$

$$dh - \frac{4\cdot ae - 5}{2} = 0.00000$$

$$bd - \frac{(2\cdot ae - 3)\cdot(4\cdot ae - 5)}{2} = 0.00000$$

Three out of eleven required logical operators asserted of them. Notice that these flaws did not effect the important last two equations.

$$\frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.21426$$

$$de - \frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.00000$$

$$\frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.92852$$

$$dh - \frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.00000$$

$$\frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.39789$$

$$bd - \frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.00000$$

$$\sqrt{3\cdot ae - ae^2 - 2} = 0.45177$$

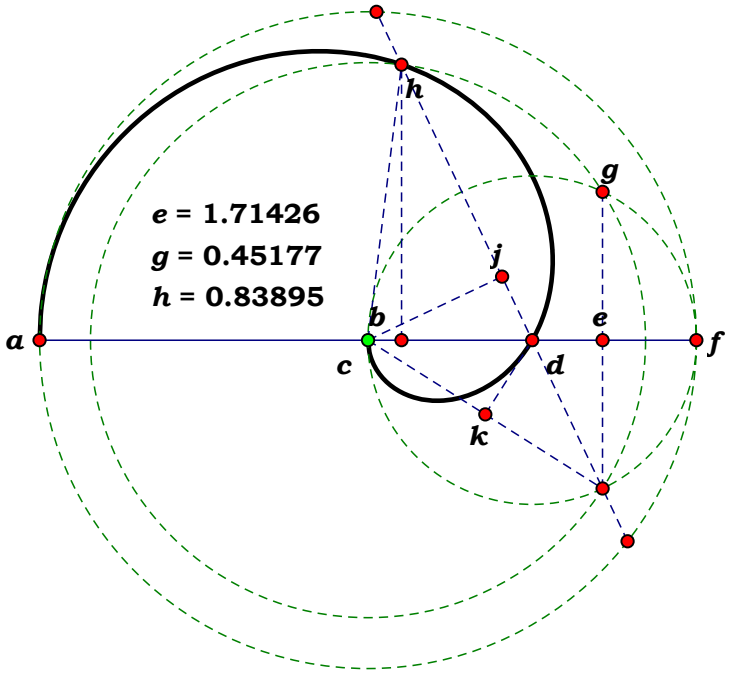
$$g - \sqrt{3\cdot ae - ae^2 - 2} = 0.00000$$

$$((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}) = 0.83895$$

$$h - ((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}) = 0.00000$$

$ac = 5.64208$ cm
$cf = 5.64208$ cm
$cd = 2.82104$ cm
$ae = 9.67200$ cm
$ce = 4.02992$ cm
$de = 1.20888$ cm
$dh = 5.23879$ cm
$bd = 2.24493$ cm

$cf = 1.00000$
$cd = 0.50000$
$ae = 1.71426$
$ce = 0.71426$
$ad = 1.50000$
$de = 0.21426$
$dh = 0.92852$
$bd = 0.39789$
$2\cdot ae - 3 = 0.42852$
$4\cdot ae - 5 = 1.85704$
$g = 0.45177$
$h = 0.83895$



$$de - \left(ae - \frac{3}{2}\right) = 0.68757$$

$$dh - \frac{4\cdot ae - 5}{2} = 0.37514$$

$$bd - \frac{(2\cdot ae - 3)\cdot(4\cdot ae - 5)}{2} = 0.00000$$

Three out of eleven required logical operators asserted of them. Notice that these flaws did not effect the important last two equations.

$$\frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.34379$$

$$de - \frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.00000$$

$$\frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.18757$$

$$dh - \frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.00000$$

$$\frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.12897$$

$$bd - \frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.00000$$

$$\sqrt{3\cdot ae - ae^2 - 2} = 0.36306$$

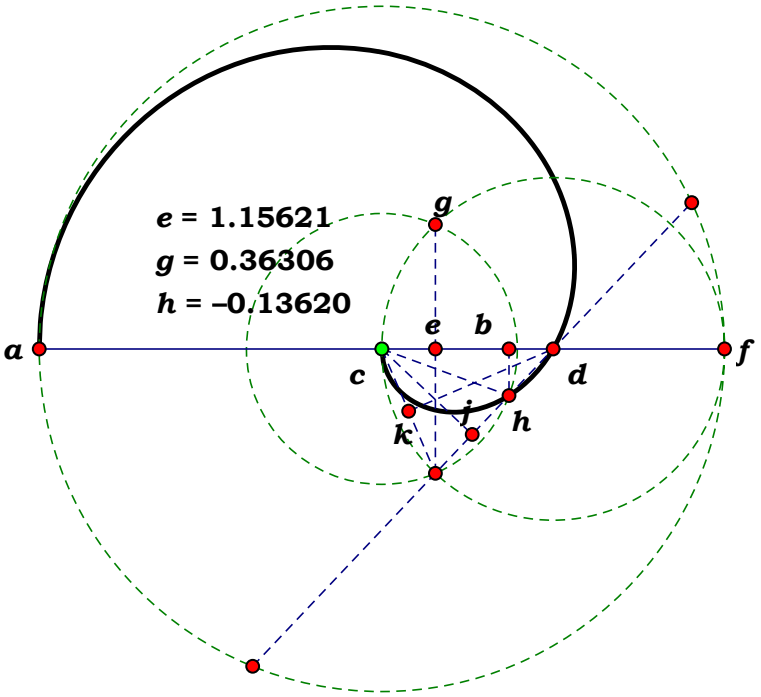
$$g - \sqrt{3\cdot ae - ae^2 - 2} = 0.00000$$

$$\left((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}\right) = -0.13620$$

$$h - \left((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}\right) = 0.00000$$

$ac = 5.64208$ cm
$cf = 5.64208$ cm
$cd = 2.82104$ cm
$ae = 6.52346$ cm
$ce = 0.88138$ cm
$de = 1.93967$ cm
$dh = 1.05829$ cm
$bd = 0.72765$ cm

$cf = 1.00000$
$cd = 0.50000$
$ae = 1.15621$
$ce = 0.15621$
$ad = 1.50000$
$de = 0.34379$
$dh = 0.18757$
$bd = 0.12897$
$2\cdot ae - 3 = -0.68757$
$4\cdot ae - 5 = -0.37514$
$g = 0.36306$
$h = -0.13620$



$$de - \left(ae - \frac{3}{2}\right) = 0.41558$$

$$dh - \frac{4\cdot ae - 5}{2} = 0.00000$$

$$bd - \frac{(2\cdot ae - 3)\cdot(4\cdot ae - 5)}{2} = 0.07017$$

Three out of eleven required logical operators asserted of them. Notice that these flaws did not effect the important last two equations.

$$\frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.20779$$

$$de - \frac{(3 - 2\cdot ae)^2}{2\cdot\sqrt{(2\cdot ae - 3)^2}} = 0.00000$$

$$\frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.08442$$

$$dh - \frac{\sqrt{(4\cdot ae - 5)^2}}{2} = 0.00000$$

$$\frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.03508$$

$$bd - \frac{\sqrt{((2\cdot ae - 3)\cdot(4\cdot ae - 5))^2}}{2} = 0.00000$$

$$\sqrt{3\cdot ae - ae^2 - 2} = 0.45478$$

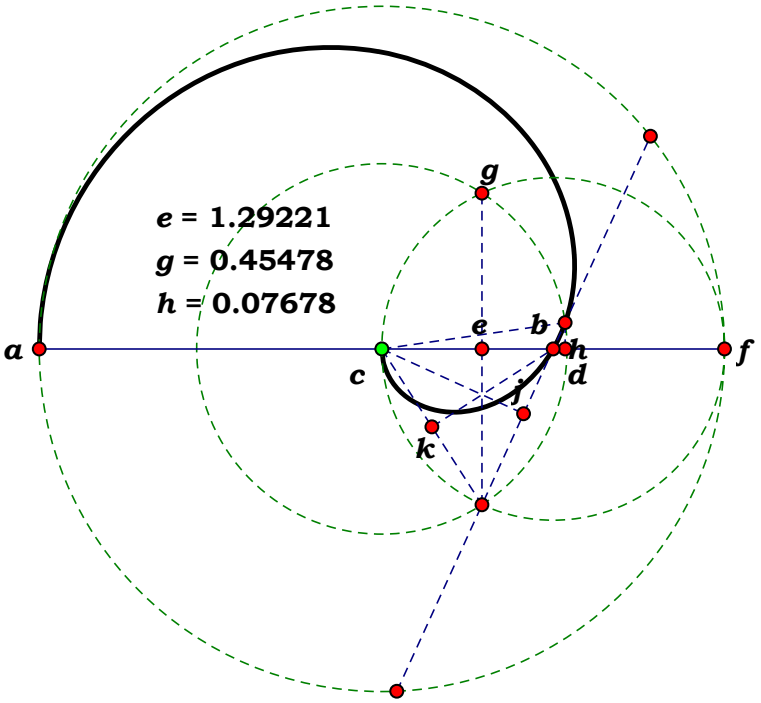
$$g - \sqrt{3\cdot ae - ae^2 - 2} = 0.00000$$

$$\left((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}\right) = 0.07678$$

$$h - \left((4\cdot e - 5)\cdot\sqrt{3\cdot e - e^2 - 2}\right) = 0.00000$$

$ac = 5.64208$ cm
$cf = 5.64208$ cm
$cd = 2.82104$ cm
$ae = 7.29075$ cm
$ce = 1.64867$ cm
$de = 1.17237$ cm
$dh = 0.47629$ cm
$bd = 0.19794$ cm

$cf = 1.00000$
$cd = 0.50000$
$ae = 1.29221$
$ce = 0.29221$
$ad = 1.50000$
$de = 0.20779$
$dh = 0.08442$
$bd = 0.03508$
$2\cdot ae - 3 = -0.41558$
$4\cdot ae - 5 = 0.16884$
$g = 0.45478$
$h = 0.07678$



The Book of One

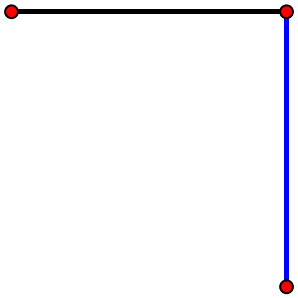
Chapter One-*Fun*damentals

Wednesday, August 9, 2023

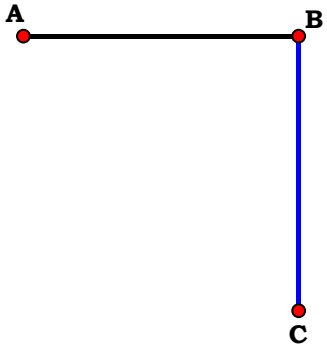
Let us learn about the four corners of the earth. Is the Earth actually flat? or has someone's I.Q. flatlined? Let us do it in 7 pages.

One is a binary consisting of a relative and its correlatives, like so:

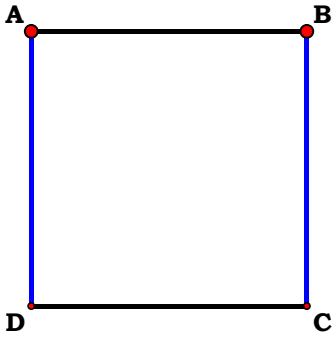
and we call this one, an arithmetical one. A Geometrical one would look like so:



And they are said to be in a one-to-one correspondence. If we name the correlatives of each one, we would have:

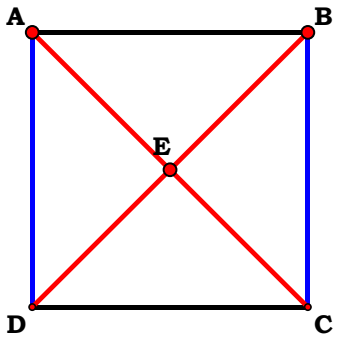


of which we can say that AB is one and BC is another one: or we might say that As A is to B, so too is B to C. If I mirror, or reproduce this relationship as if by an image, I would have.



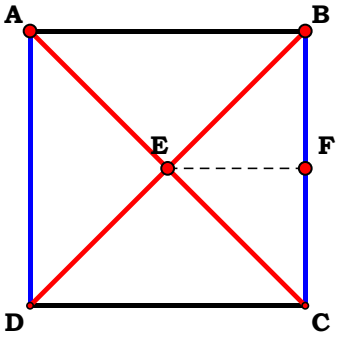
Of which I can also multiply my azes and so toos, with.

If I want to now take AC and BD, I would have something such as:

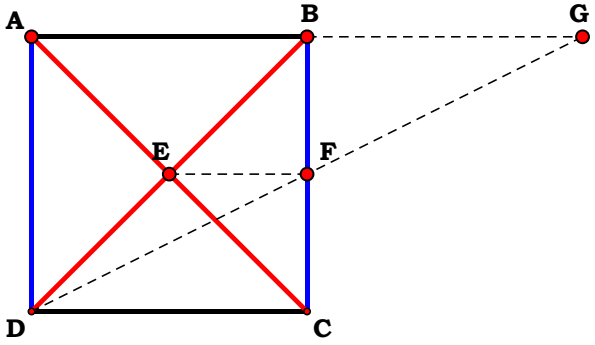


Which I could make up a lot of stories about, calling it a Grammar Matrix, or the Four Corners of the Earth. What can it teach us? It can help teach us all of judgment, or computation, or grammar, taking these three words as synonyms. Suffice it to say, that if we want to learn about the one, we have to start smack dab in the center of ones. Being surrounded by one's we can put them to work.

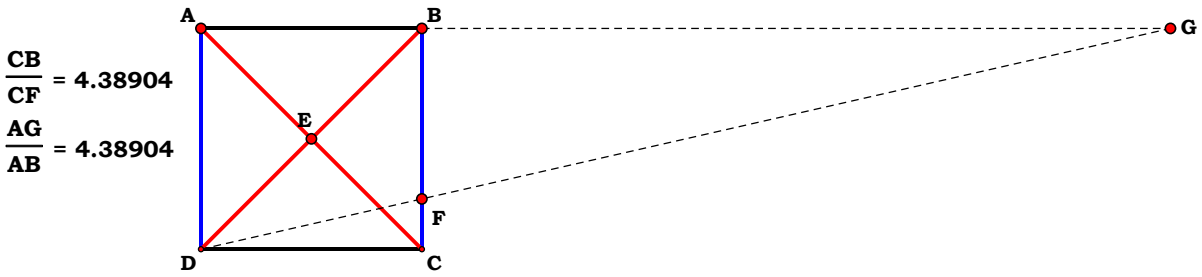
Let us learn how to walk with it.



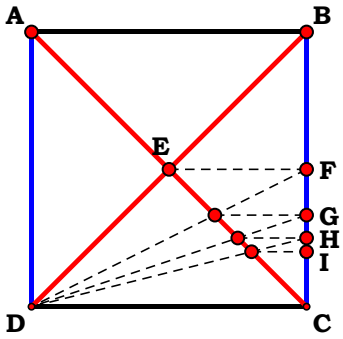
One can, by simple thought, realize that EF is one half of, AB, BC, CD, AD. This is not remarkable. However:



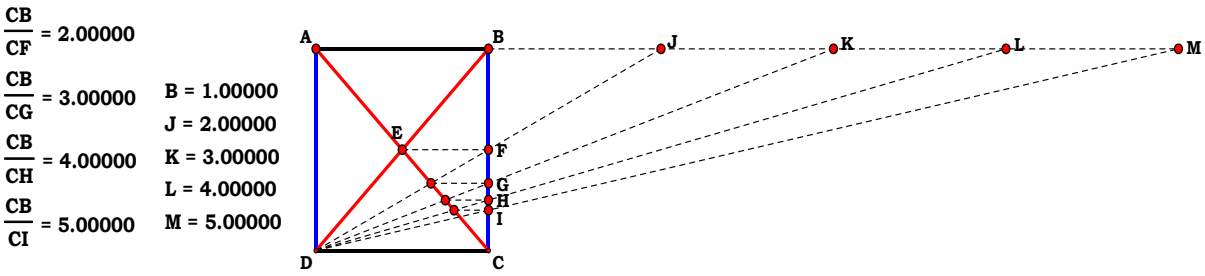
We now can see that as CF is to BC so too is AB to AG. And this is always true.



So that, should we want to learn how to count, we would simply do this:



And then complete the figure as



How many times you divide BC by Geometric recursion, you will achieve any number AM by Arithmetic recursion. In terms of basics, one need no such terms as fractions, or to perpetuate a myth that fractions are a different form of mathematics. Fraction only means that you have divided some one thing. Fraction is not a thing; it is your behavior with a thing.

The series between B and C is called a Geometric series, and this means that we are dividing 1, and the series between A and M is called an Arithmetic series, which means we are multiplying one. We also notice that the arithmetic names, 1 to 5, gives us no information as to what it names, an arithmetic series, or a geometrical one: they both end up with the same arithmetic name and all it means is that any arithmetic name is independent as to the recursion used to form that name. It is very important to understand that a name is independent of what it names, completely. A name neither adds to, nor subtracts from, that which is named. One cannot learn to reason, if they cannot maintain the meaning of a name.

It also means that a name is always proportional to the unit by which a thing is named. This is true about names in general, be they any name in any member of our Grammar Matrix which consists of: Common Grammar, Arithmetic, Algebra or Geometry. It also means that every name, is determined by some standard unit called a definition. Every name of a thing is a compound of the names of relatives and correlatives, or nouns and verbs, and the unit is called not only a thing's First Principles, for a thing's first principle parts of a relative constrained by correlatives, but also it is called its definition. As Plato noted, when we know a thing's First Principles, those will be expressed by a naming convention for the names of the correlatives and the names of the relatives. All we can do to process information is name the parts of a thing and devise a method of keeping the order by which we named a thing and this is the key concept in information processing: it is called a convention of names.

It also means, that in information processing, nothing is less than one, nor is anything greater than one. Therefore, in order to differentiate the name one, we have to know if it means *one* part or one whole. Is it Arithmetic, where there is nothing less than one, or Geometric, where nothing is greater than one? In short, does it name the relative, or the correlative. The ability to make this distinction is why Plato wrote *Parmenides* as a training exercise.

We can now put all of our learning in line such as:

A = 0.00000

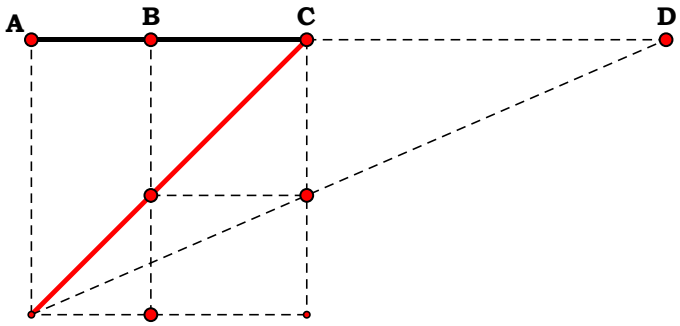
B = 0.43386

C = 1.00000

D = 2.30487

$$\frac{C}{B} = 2.30487$$

$$\frac{D}{C} = 2.30487$$

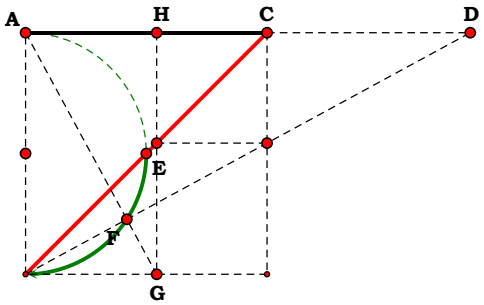


Such that now, when we use any name, such as D, we can, if we try, remember that D also means, D is proportional to C, or the unit, or again, the definition of a thing. If we forget that, as most modern scholars have, then they end up speaking and thinking, as Plato demonstrated in *Parmenides*, gibberish, worshipping a Bobble Head of Einstein, who, because he could not understand it, dismissed geometry altogether; in short, a champion of Protagoras, not Plato. Protagoras was the ancient Greek champion of Relativity, not Einstein. We have two, and only two concepts to formulate information processing on and one can only think and speak, and act, in terms of how well they comprehend it. Animals use the relative, or again, particular differences, a man is supposed to use the correlative, in fact, a mind can only assert the correlative: Physically, you can only assert the correlative, like any sculptor can. So much for animals, and the mystics like Protagoras, Einstein, et al. As every system of binary recursion, is accomplished by the application of a correlative, those who claim that information processing is determined by the relative, are simply incompetent.

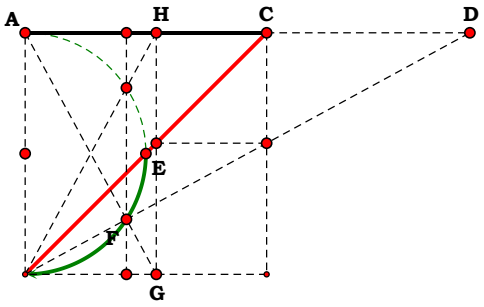
Plugging your home computer into a 440-volt source will not supercharge it, no more than putting it in the oven to change the nature of one will. So, let us see if you clearly understand it. Is the art of names based upon a standard of behavior, or the behaviors of any relative difference in the universe you happen to stumble over? A theory is the product of an illiterate. Grammar Systems are the products of Man.

In a Universe, the relative differences are a given, the correlatives are applied by the interactions of relatives and they are not the relatives. The noun is never the verb. Using this fact, is Zeno's Paradox really a paradox at all, the half-step thingy, or is it a grammatical fact? If you follow out the Geometric progression, you will see, you never do reach C.

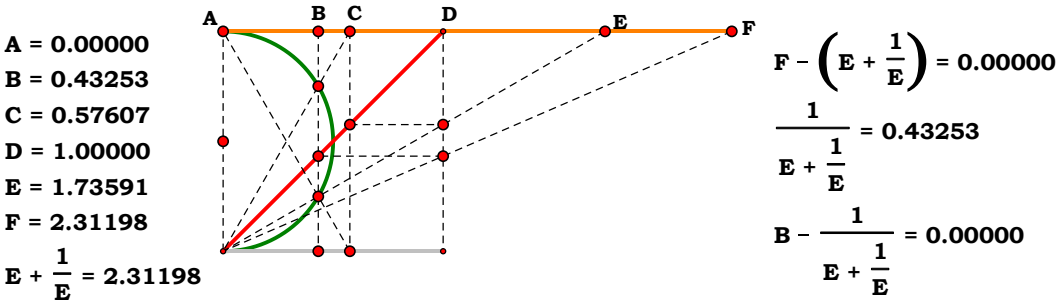
The two series, Arithmetic and Geometric have another name, they are said to be reciprocal to each other, if given one, then one knows the other.



You can see, that a quadrant of circle can be found which expresses every possible arithmetic number, while the top quadrant of the same circle expresses every reciprocal if D where between A and C. Thus, you can guess that every angle actually is only between what are called 0 and 90 degrees if one were to maintain a relationship between Arithmetic and Geometric systems of names.



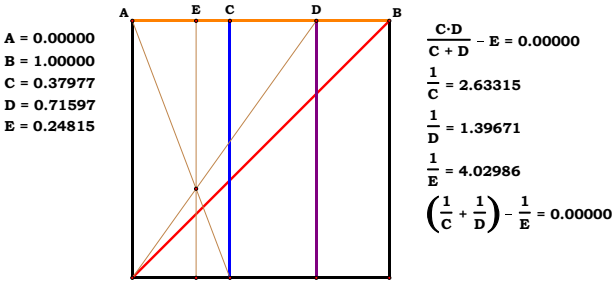
So that, one does not have to even invent a whole new method of binary recursion to name angles since a circle has a definite relationship to the reciprocal: Let E be any value whatsoever; then:



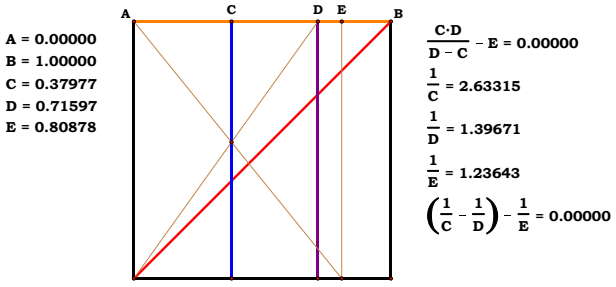
providing of course, one takes the time to learn what they are doing to begin with. To learn binary recursion, one has to dedicate themselves to learning the power of one by not naming any particular one, but one, in relationship to the operations performable with it.

Leaving this digression behind, let us pull out of our box, the elementary operations with things, addition, subtraction, multiplication, and division, roots and squares.

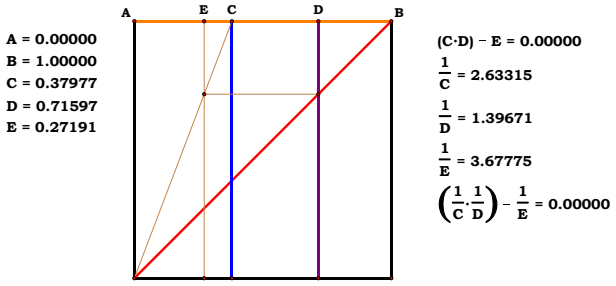
1. Given two values C and D, add them to produce E.



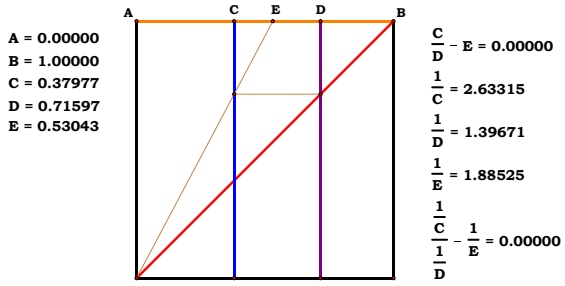
2. Given two values C and D, subtract D from C to produce E.



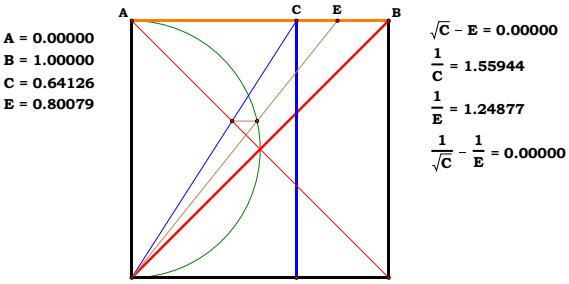
3. Given two values C and D, multiply them to produce E.



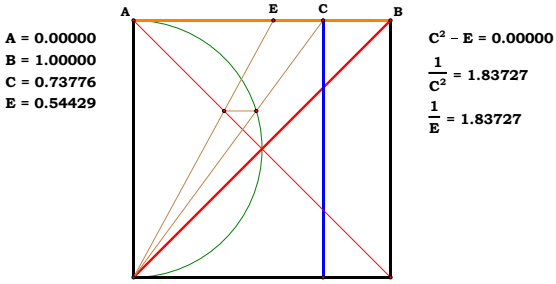
4. Given two values C and D divide C by D to produce E.



5 Given any value C what is its square root E?



6 Given any value C what is its square E?



So, there it is, 9, 9, 9, nine operations,

1. The arithmetic unit. 2. The Geometric unit. 3. Recursion. 4. Addition. 5. Subtraction. 6. Multiplication. 7. Division. 8. Root. 9. Square.

Nine operations in perception, conception, and will.

Now, realize what you have. You have the Elementary Universal Computational Chip, as a given in the Universe. It can be developed and stacked to produce a computer of endless complexity. And here is what it can do that no manmade computer can do. Its output is concurrent with the input, i.e., 0 computational time, i.e., it is independent even of the relative difference of time, for if it were not, then your Protagoras' and Einsteins, your quacks and mythologers would be right. But as you can see, they are factually wrong. Information processing is part, and parcel of the Universe itself. By physical fact, we can only assert correlatives, and a theory about the relative, is just that; gibberish.

The Book of One

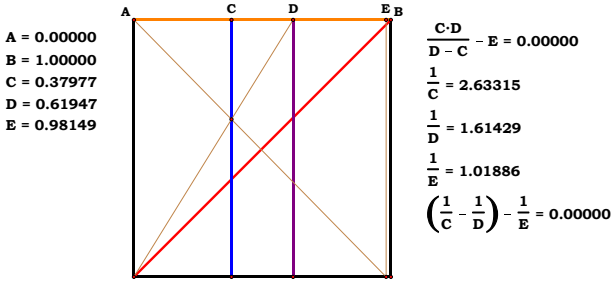
Chapter Two Reality Check

Friday, August 11, 2023

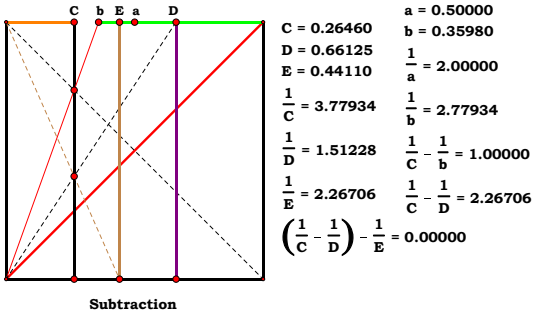
Although we can construct all six operations upon a thing, we notice something curious, of the six, two of our set stop working under decidedly obvious circumstances, therefore, ought we not to construct them in such a manner as to indicate that we are fully aware of the limitations of the operation such that we will not ask the figure constructed to violate the Laws of Identity, or one can say, the Law of Reality? Can we ask that which is within reason?

Which two are they? Subtraction and Division.

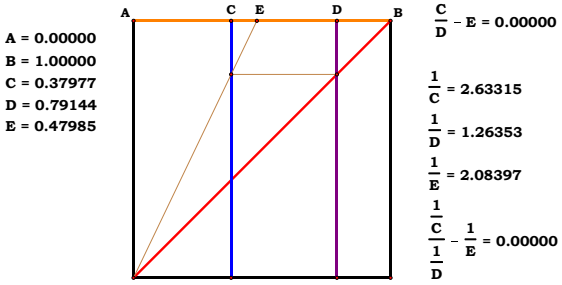
In subtraction, one can only subtract so much from a thing before one has nothing left to subtract. Rationally, one cannot subtract from a thing and have the universe write out a bill of deficit to you. So, let us see if we can construct the figure better. This is the current figure but it will not project out of reality, still it can be improved:



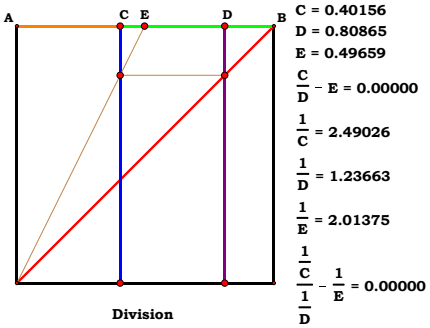
And left to itself, it is true, however, one has to review history. People actually believe that you can abstract more from a thing than what is actually in that thing to subtract, for example, negative numbers, a pure fiction. Claiming, in any manner, that a thing differs from itself, is not rational. The constraints on the operation are, one must have at least two things, to subtract one from the other and the remainder cannot be less than one. This is easy to construct. a is half the Universe of discourse, and b, C + 1.



Division is a lot simpler. We cannot divide C by anything greater than C. C has no constraint, but the division must be less than or equal to C. This is our current figure, and it too will not project out of reality, but again, still it can be improved in recognition of our reality check.



The correct way to construct it is in recognition that we will not tell it to do the impossible.



There are many who claim that reality is not enough for them, as if they have somehow, mastered all there is and require more, when in fact, those claims only mean that they cannot deal with what is on their plate and need to waist not only their time, but yours with pure gibberish.

One has to remember, this unit box of ours is by natural fact, representative of the whole of reality, it will only function in terms of a universal unit, again, our biological and physical constraint. We are tethered by physical fact to reality, and we should remind ourselves to tether our thoughts accordingly when attempting meaningful computation.

The Book of One

Chapter Three Power

Friday, August 11, 2023

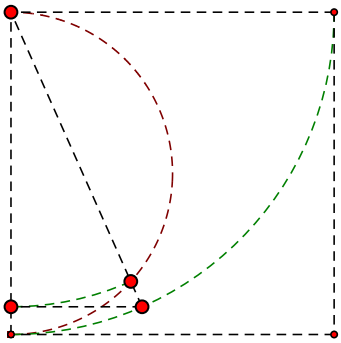
A mind, when functional, is the most powerful life support system possible. That power comes from the recursion of memory. Memory allows us to predict the future based on what we have learnt from the past. We can, therefore, judge our behavior before committing to it.

In the past, low intelligent scholars robbed the potential of our most powerful system of grammar by denying the use of memory. As all one can do in grammar is learn how to apply correlatives, and learn to remember the paths of application, those scholars effectively fettered geometry to inhibit its power. No more.

Let us use memory, to effect the ability to functionally use any Power which we write Algebraically as the exponent. Let us review something about the circle.

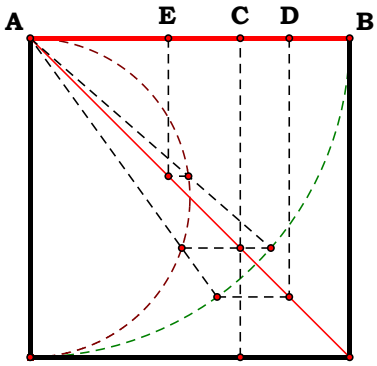
The Circle

Every system of grammar is a method of effecting binary recursion. With the straightedge we can effect the binary unit, and by definition even of the *Elements* by Euclid, the circle is the recursion of that unit, i.e., our mathematics by which to write the grammar. The compass does not provide us with just a single instance of a circle, but with the whole of binary recursion. With it, we can even find a number of different ways to construct the mathematics of a circle using just straight lines projecting a loci. So, let us look at a common method of producing a circle, proportioning the circle to itself.



With it we can learn how to project the 2-exponential series.

Unit = 1.00000
A = 0.00000
B = 1.00000
C = 0.65762
D = 0.81094
E = 0.43247



$\frac{1}{C} = 1.52063$

$\frac{1}{D} = 1.23314$

$\frac{1}{E} = 2.31232$

$C^{\frac{1}{2}} - D = 0.00000$

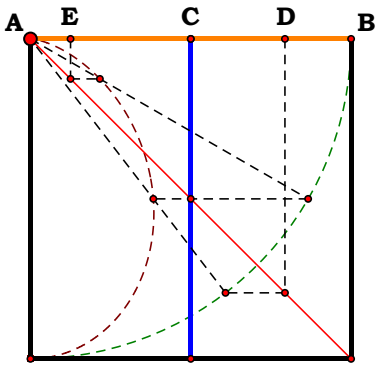
$C^2 - E = 0.00000$

$\left(\frac{1}{C}\right)^{\frac{1}{2}} - \frac{1}{D} = 0.00000$

$\left(\frac{1}{C}\right)^{2} - \frac{1}{E} = 0.00000$

Or any other, let us solve the *Delian Problem*, the next in the series, a 3-exponential series.

Unit = 1.00000
A = 0.00000
B = 1.00000
C = 0.50000
D = 0.79370
E = 0.12500



$\frac{1}{C} = 2.00000$

$\frac{1}{D} = 1.25992$

$\frac{1}{E} = 8.00000$

$2^{\frac{1}{3}} = 1.25992$

$C^{\frac{1}{3}} - D = 0.00000$

$C^3 - E = 0.00000$

$\left(\frac{1}{C}\right)^{\frac{1}{3}} - \frac{1}{D} = 0.00000$

$\left(\frac{1}{C}\right)^{3} - \frac{1}{E} = 0.00000$

$\frac{1}{D} - 2^{\frac{1}{3}} = 0.00000$

Every system of grammar involves the ability to produce a binary and a method of that binaries recursion. Hobbling one or both of these means one has a crippled grammar system, i.e., one based on illiteracy, the results of which, indicates one is incapable of reliable judgment. Therefore, hobbling Geometry is non-Euclidean.

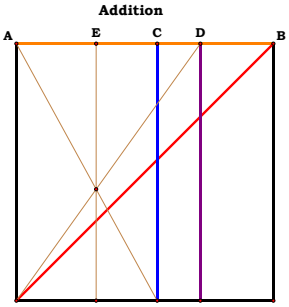
Now, our Universal Computational Chip is not so elementary anymore, in fact, one can now learn and use all loci for making even very exotic chips for computation, all given, by Nature, or the Universe, or some say God.

At any rate, the true Golden Ratio, is that between Arithmetic Recursion, and Geometric Recursion and it is impossible to claim that we do not use both concurrently.

Operations

Friday, August 11, 2023

Some people can look at a figure and learn from it, i.e., they can learn math upon things with simply the correct figure to start their studies. One can call these



A = 0.00000
B = 1.00000
C = 0.54787
D = 0.71597
E = 0.31037

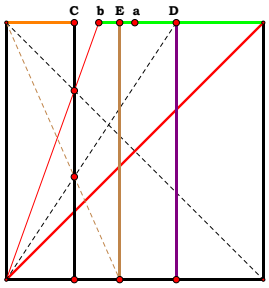
$\frac{C \cdot D}{C + D} - E = 0.00000$

$\frac{1}{C} = 1.82525$

$\frac{1}{D} = 1.39671$

$\frac{1}{E} = 3.22196$

$\left(\frac{1}{C} + \frac{1}{D}\right) - \frac{1}{E} = 0.00000$



Subtraction

C = 0.26460
D = 0.66125
E = 0.44110

$\frac{1}{C} = 3.77934$

$\frac{1}{D} = 1.51228$

$\frac{1}{E} = 2.26706$

$\left(\frac{1}{C} - \frac{1}{D}\right) - \frac{1}{E} = 0.00000$

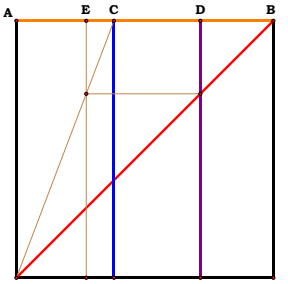
a = 0.50000
b = 0.35980

$\frac{1}{a} = 2.00000$

$\frac{1}{b} = 2.77934$

$\frac{1}{C} - \frac{1}{b} = 1.00000$

$\frac{1}{C} - \frac{1}{D} = 2.26706$



Multiplication

A = 0.00000
B = 1.00000
C = 0.37977
D = 0.71597
E = 0.27191

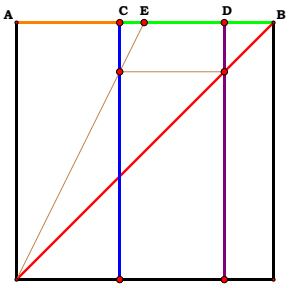
$(C \cdot D) - E = 0.00000$

$\frac{1}{C} = 2.63315$

$\frac{1}{D} = 1.39671$

$\frac{1}{E} = 3.67775$

$\left(\frac{1}{C} \cdot \frac{1}{D}\right) - \frac{1}{E} = 0.00000$



Division

C = 0.40156
D = 0.80865
E = 0.49659

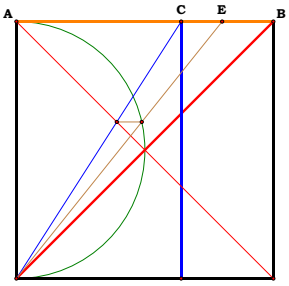
$\frac{C}{D} - E = 0.00000$

$\frac{1}{C} = 2.49026$

$\frac{1}{D} = 1.23663$

$\frac{1}{E} = 2.01375$

$\frac{\frac{1}{C}}{\frac{1}{D}} - \frac{1}{E} = 0.00000$



Root

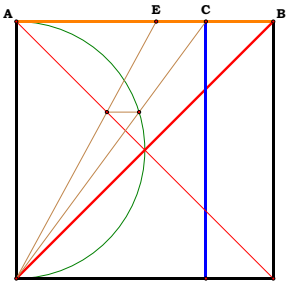
A = 0.00000
B = 1.00000
C = 0.64126
E = 0.80079

$\sqrt{C} - E = 0.00000$

$\frac{1}{C} = 1.55944$

$\frac{1}{E} = 1.24877$

$\frac{1}{\sqrt{C}} - \frac{1}{E} = 0.00000$



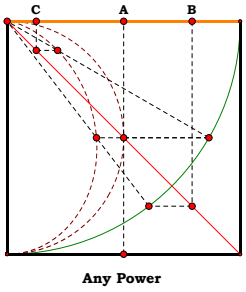
Square

A = 0.00000
B = 1.00000
C = 0.73776
E = 0.54429

$C^2 - E = 0.00000$

$\frac{1}{C^2} = 1.83727$

$\frac{1}{E} = 1.83727$



Any Power

A = 0.50000
B = 0.79370
C = 0.12500

$\frac{1}{A} = 2.00000$

$\frac{1}{B} = 1.25992$

$\frac{1}{C} = 8.00000$

$A^3 - C = 0.00000$

$\left(\frac{1}{A}\right)^3 - \frac{1}{C} = 0.00000$

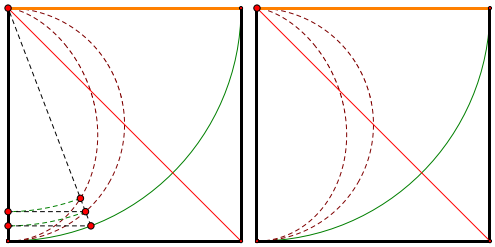
$A^{\frac{1}{3}} - B = 0.00000$

$\left(\frac{1}{A}\right)^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

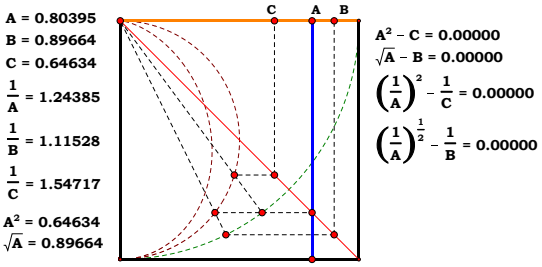
$2^{\frac{1}{3}} - \frac{1}{B} = 0.00000$

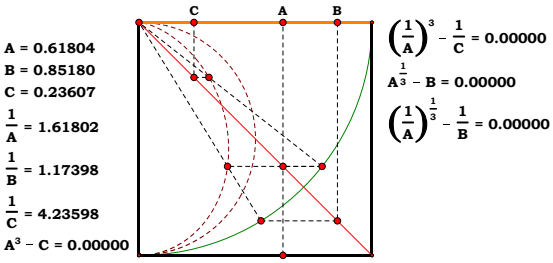
Any Power

First construct the Loci

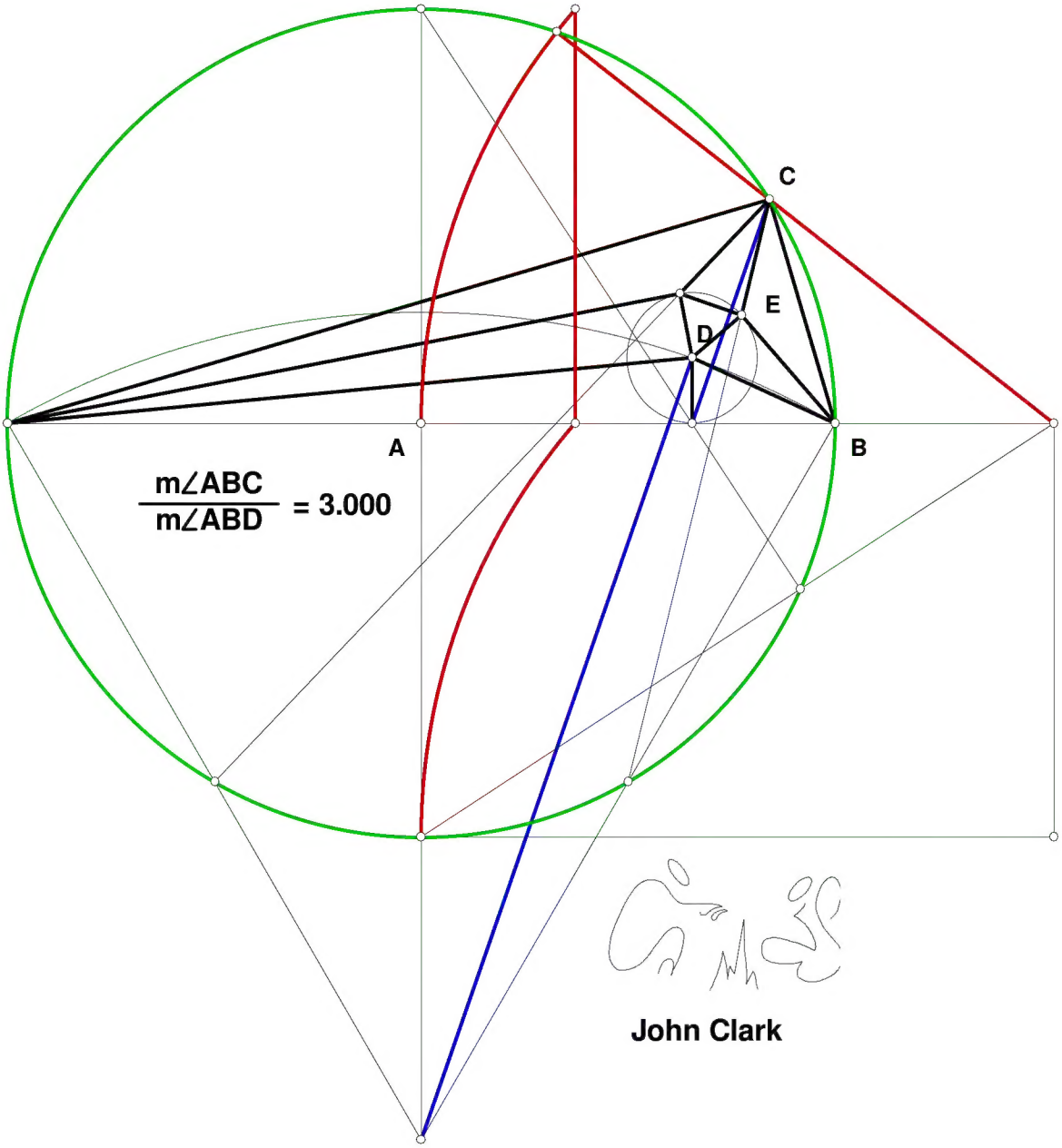


to one's desired power





Three Pieces Of Paper



John Clark

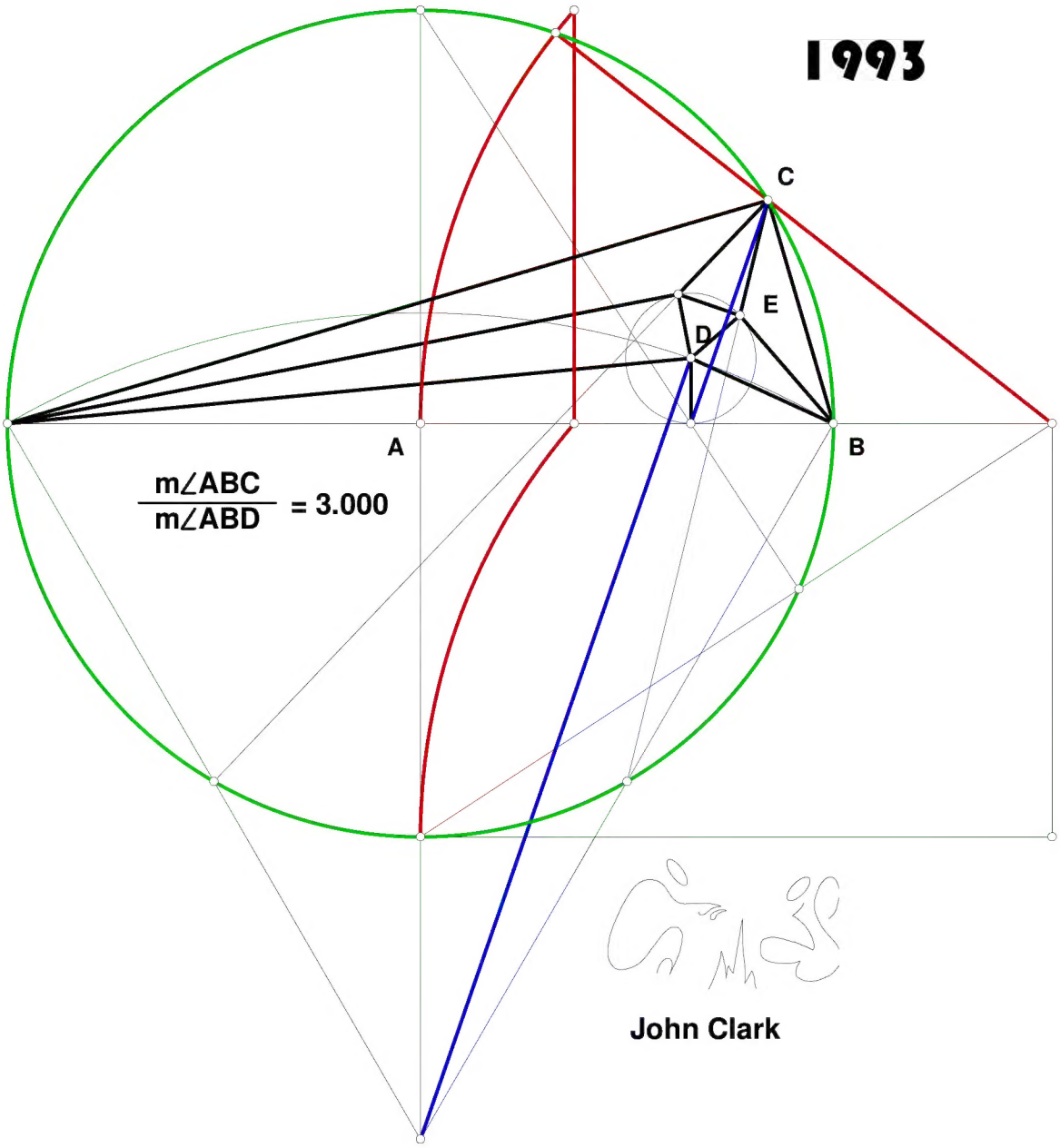
Three Pieces Of Paper

Introduction

Is a novel about the search for a method to divide angles into at least three equal parts. The novel is written in the relatiologic of Geometry and the tautologic of basic Algebra.

I suspect that someday I might have something of significance to write here. J. C.

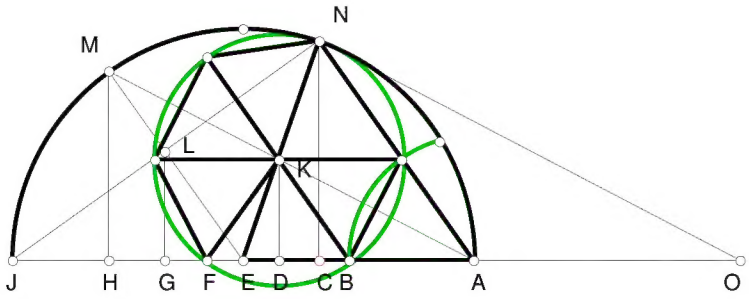
Three Pieces Of Paper



John Clark

11/11/93 The Archamedian Paper Trisector

If one accepts the facts of the original figure, one only need prove that BK = AB.
If one does not accept the facts, examination of the construction should make it apparent. Does FK = BK = AB?



$N := 4$ $AJ := 1$ $AE := \frac{AJ}{2}$ $EJ := AE$ $EN := AE$ $EM := AE$ $AC := \frac{AJ}{N}$

$CJ := AJ - AC$ $CN := \sqrt{AC \cdot CJ}$ $JN := \sqrt{CN^2 + CJ^2}$ $JL := \frac{JN}{2}$ $GL := \frac{CN}{2}$ $GJ := \frac{CJ}{2}$

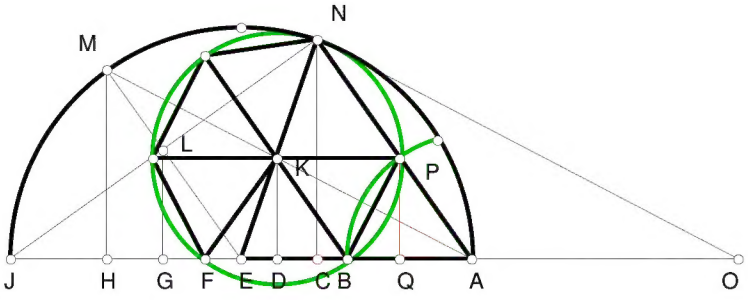
$EG := EJ - GJ$ $EL := \sqrt{EG^2 + GL^2}$ $EH := \frac{EG \cdot EM}{EL}$ $HM := \frac{GL \cdot EM}{EL}$ $AH := AE + EH$

$CO := \frac{AH \cdot CN}{HM}$ $CE := AE - AC$ $EO := CO + CE$ $EK := \frac{EN \cdot AE}{EO}$ $DE := \frac{CE \cdot AE}{EO}$ $DK := \frac{CN \cdot EK}{EN}$

$AD := AE - DE$ $KN := EN - EK$ $BK := KN$ $BD := \sqrt{BK^2 - DK^2}$ $AB := AD - BD$

$AB - BK = 0$ $AB = 0.25$

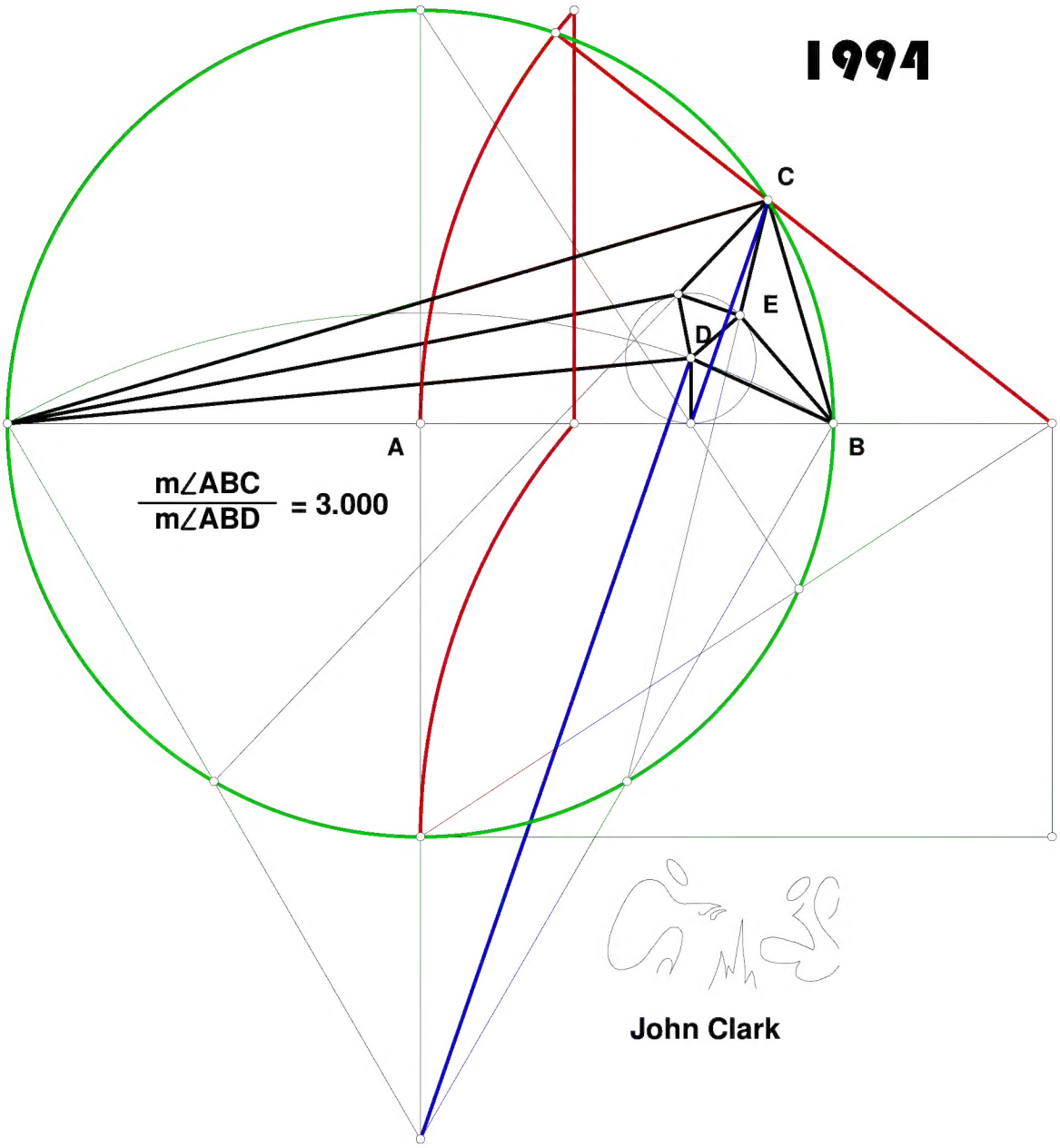
If PK is parallel to AJ, then . . . .



$AN := 2 \cdot EL$ $AP := AB$ $PQ := \frac{CN \cdot AP}{AN}$ $PQ - DK = 0$

Three Pieces Of Paper

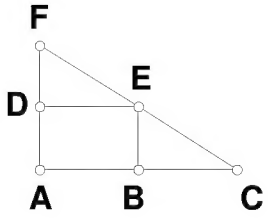
1994



John Clark

042994

Given AB, AF, BE, what is EF?



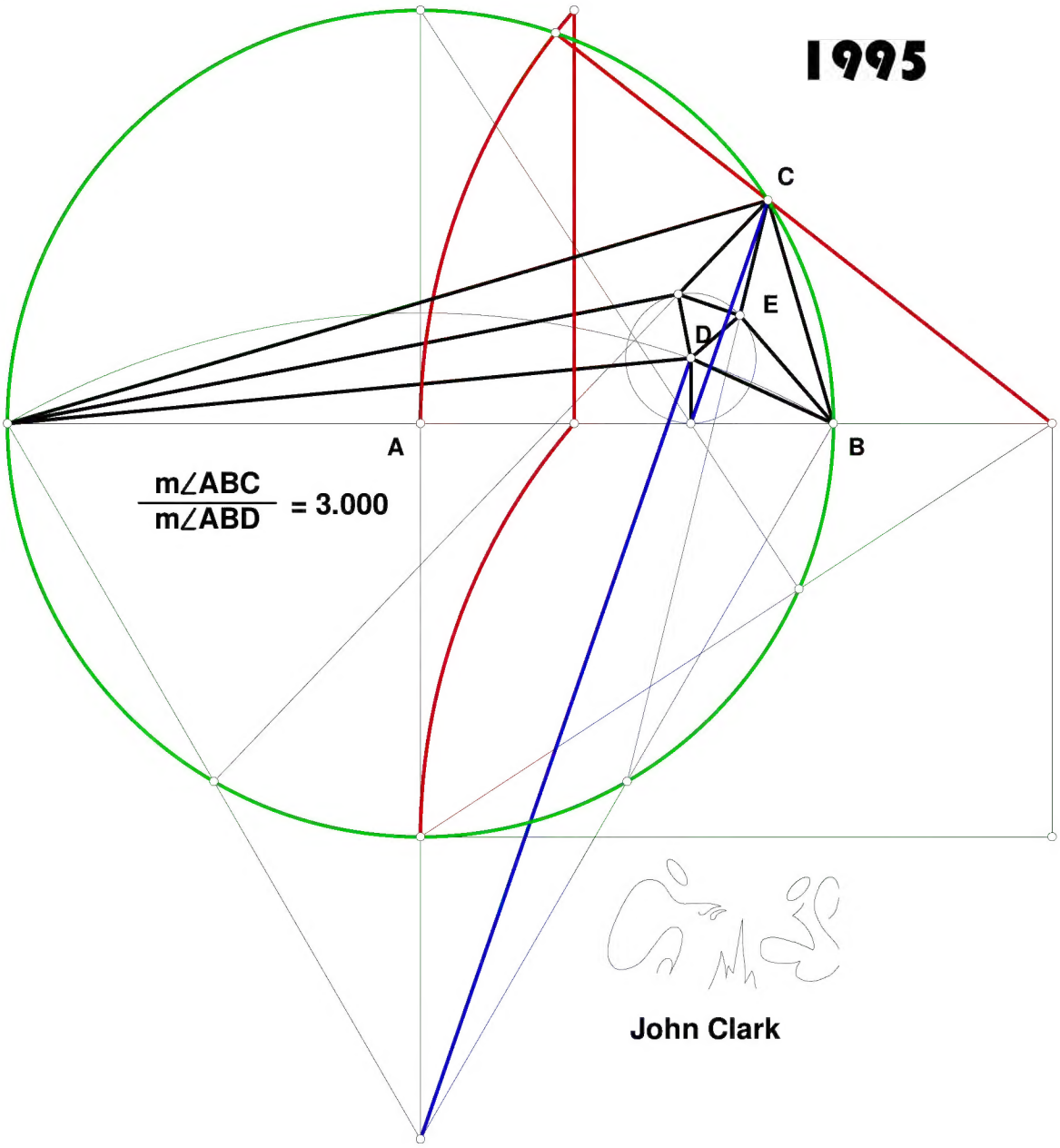
$N_1 := 2 \quad N_2 := 3 \quad N_3 := 5 \quad AF := N_1 \quad BE := N_2 \quad AB := N_3$

$AD := BE \quad DE := AB \quad DF := AF - AD \quad EF := \left(DF^2 + DE^2\right)^{\frac{1}{2}}$

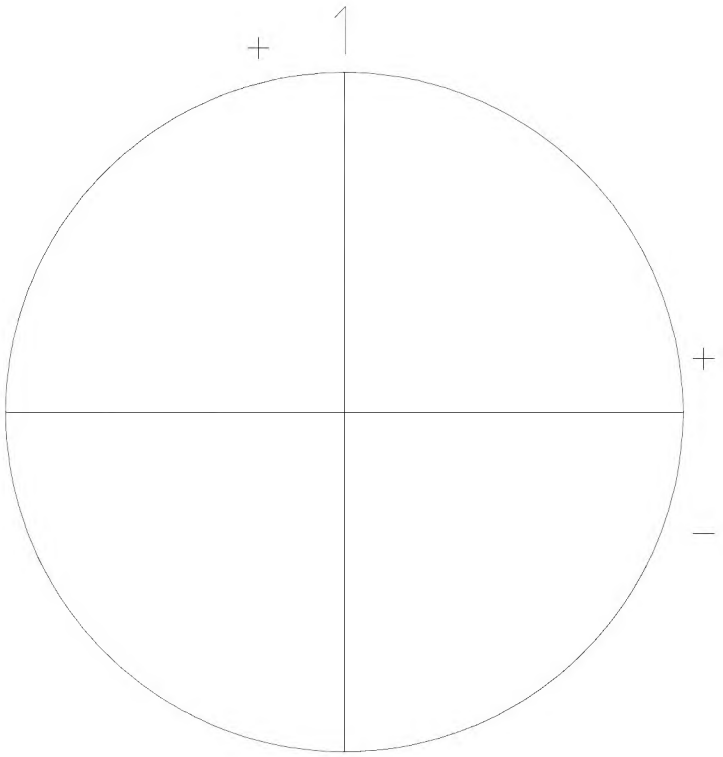
$$EF - \sqrt{N_1^2 - 2 \cdot N_1 \cdot N_2 + N_2^2 + N_3^2} = 0$$

Three Pieces Of Paper

1995



John Clark

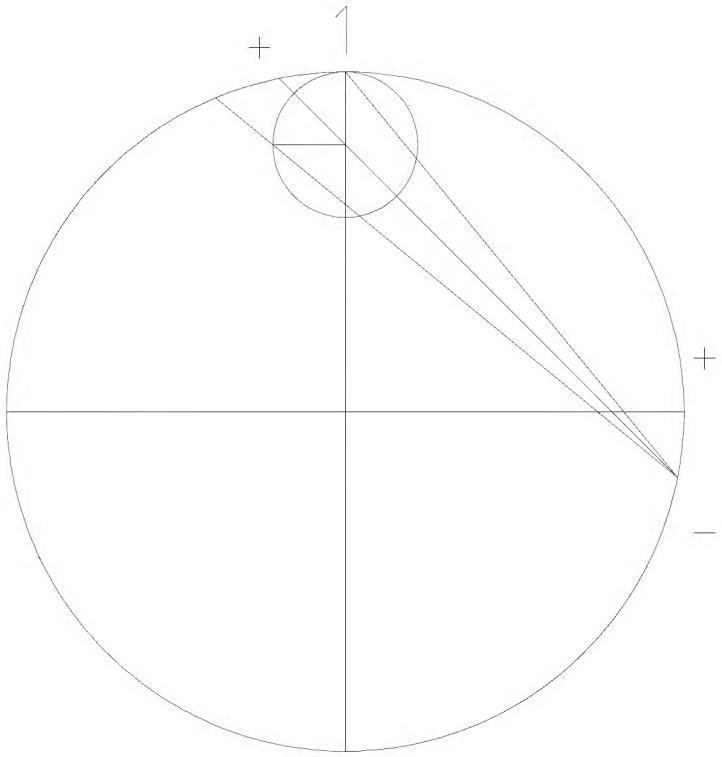


01_12_95.MCD

Archamedian Trisection Revisited.

I am curious as to why the Archamedian trisection is still taught the way it was given so long ago and the idea from which it derives is not in any of my books.

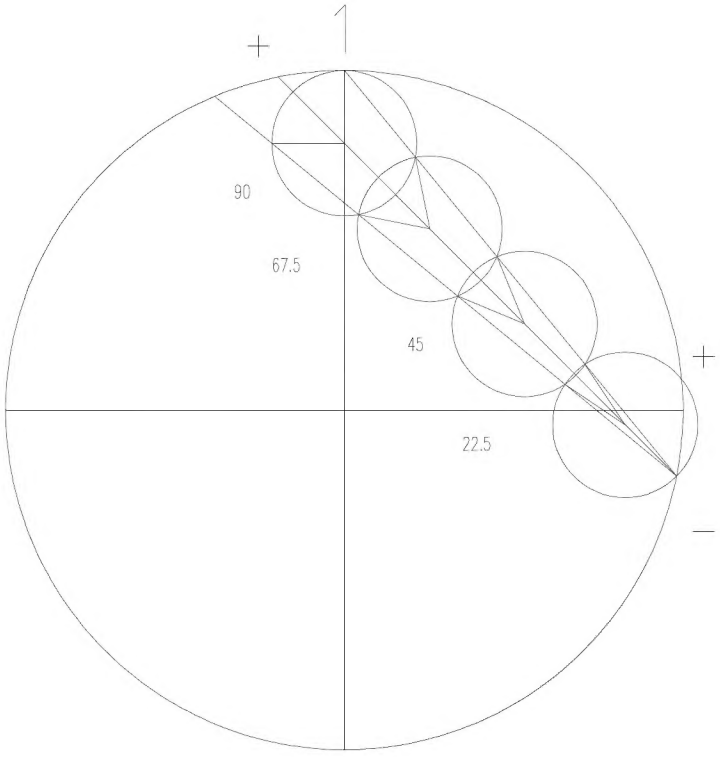
I am going to use a circle to demonstrate some principles concerning angles. To help log the results in mathematical terms, I will divide the circle into quadrants and label them either plus or minus. The top is labeled one.



The circle is divided into 1/8 segments of 90 degrees for each quadrant. I start at the top. Since the angle at the perimeter is 1/2 of the angle at the center, when I start the figure I use twice the arc segment for the angle I am working with. I have marked some quadrants with plus and minus and have found that for the figure, I would say that I have 1 + 1/8 - 1/8. From this I have learned that my starting angle of the smaller circle will be 90 degrees.

$$\frac{90}{8} = 11.25$$

$$90 + \frac{90}{8} - \frac{90}{8} = 90 \qquad \left(1 + \frac{1}{8} - \frac{1}{8}\right) \cdot 90 = 90$$



$$B := 1 + \frac{1}{8} - \frac{1}{8} \qquad B = 1$$

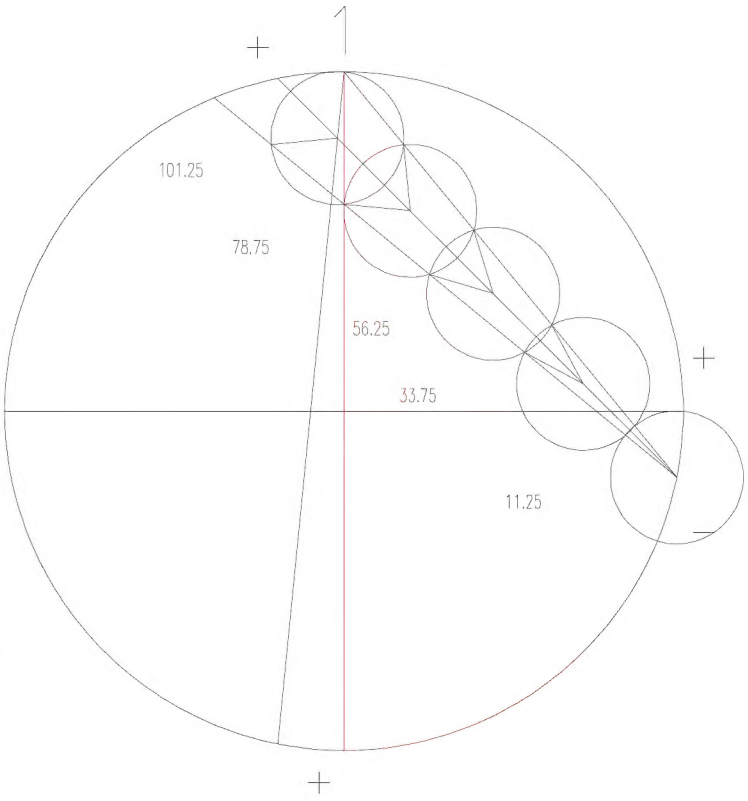
$$\frac{B \cdot 4}{4} \cdot 90 = 90 \qquad \frac{B \cdot 3}{4} \cdot 90 = 67.5$$

$$\frac{B \cdot 2}{4} \cdot 90 = 45 \qquad \frac{B}{4} \cdot 90 = 22.5$$

$8 + 1 - 1 = 8$	$8 \cdot 11.25 = 90$
$8 + 1 - 1 - 2 = 6$	$6 \cdot 11.25 = 67.5$
$8 + 1 - 1 - 2 - 2 = 4$	$4 \cdot 11.25 = 45$
$8 + 1 - 1 - 2 - 2 - 2 = 2$	$2 \cdot 11.25 = 22.5$
$8 + 1 - 1 - 2 - 2 - 2 - 2 = 0$	

$$\mathrm{mod}(8 + 1 - 1, 2) = 0$$

I have added another plus to a quadrant at the bottom of the figure.



$$B := 1 + \frac{1}{8} + \frac{1}{8} - \frac{1}{8} \qquad B = 1.125 \qquad \frac{9}{8} = 1.125$$

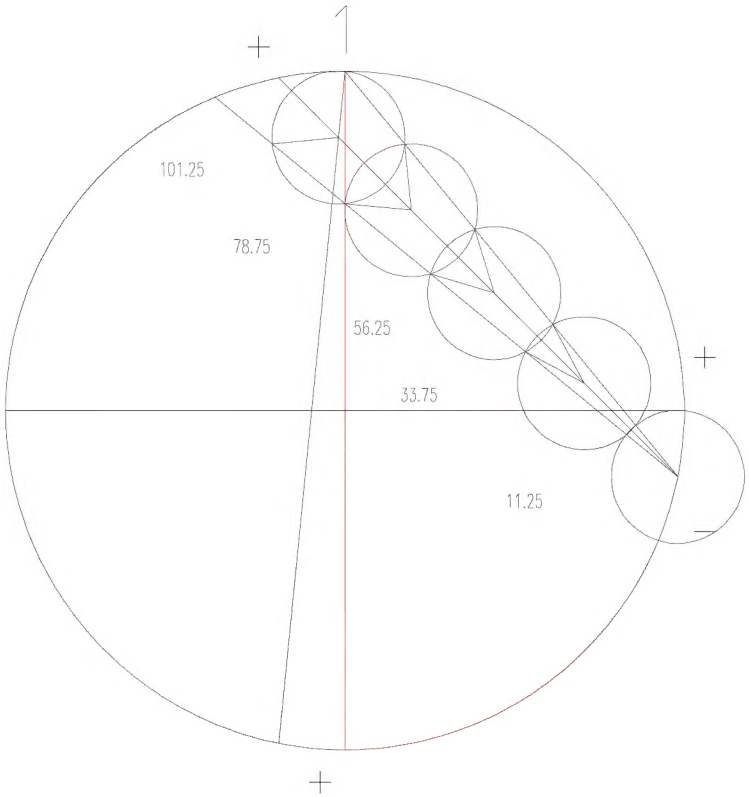
$$\frac{B \cdot 4.5}{4.5} \cdot 90 = 101.25 \qquad \frac{B \cdot 3.5}{4.5} \cdot 90 = 78.75$$

$$\frac{B \cdot 2.5}{4.5} \cdot 90 = 56.25 \qquad \frac{B \cdot 1.5}{4.5} \cdot 90 = 33.75$$

$$\frac{B \cdot .5}{4.5} \cdot 90 = 11.25$$

$8 + 1 + 1 - 1 = 9$	$9 \cdot 11.25 = 101.25$
$8 + 1 + 1 - 1 - 2 = 7$	$7 \cdot 11.25 = 78.75$
$8 + 1 + 1 - 1 - 2 - 2 = 5$	$5 \cdot 11.25 = 56.25$
$8 + 1 + 1 - 1 - 2 - 2 - 2 = 3$	$3 \cdot 11.25 = 33.75$
$8 + 1 + 1 - 1 - 2 - 2 - 2 - 2 = 1$	$1 \cdot 11.25 = 11.25$

$$\mathrm{mod}(8 + 1 + 1 - 1, 2) = 1$$



$$B := 1 + \frac{1}{8} - \frac{1}{8} + \frac{1}{8} \qquad B = 1.125 \qquad \frac{9}{8} = 1.125$$

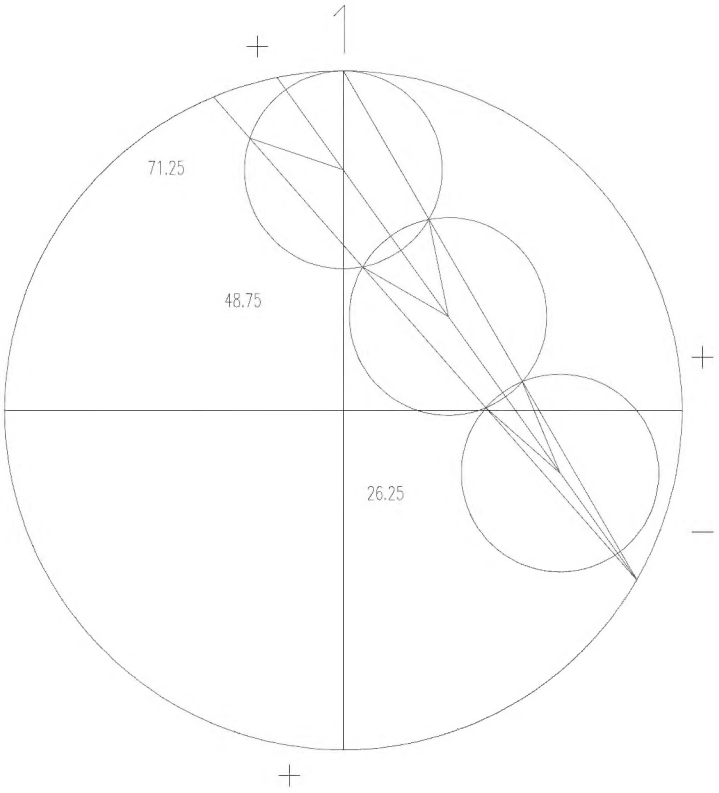
$$\frac{B \cdot 4.5}{4.5} \cdot 90 = 101.25 \qquad \frac{B \cdot 3.5}{4.5} \cdot 90 = 78.75$$

$$\frac{B \cdot 2.5}{4.5} \cdot 90 = 56.25 \qquad \frac{B \cdot 1.5}{4.5} \cdot 90 = 33.75$$

$$\frac{B \cdot .5}{4.5} \cdot 90 = 11.25$$

$8 + 1 = 9$	$9 \cdot 11.25 = 101.25$
$8 + 1 - (1 \cdot 2) = 7$	$7 \cdot 11.25 = 78.75$
$8 + 1 - (2 \cdot 2) = 5$	$5 \cdot 11.25 = 56.25$
$8 + 1 - (3 \cdot 2) = 3$	$3 \cdot 11.25 = 33.75$
$8 + 1 - (4 \cdot 2) = 1$	$1 \cdot 11.25 = 11.25$

$$\mathrm{mod}(8 + 1, 2) = 1$$



$$B := 1 + \frac{3}{24} - \frac{8}{24} \qquad B = 0.7917 \qquad \frac{19}{24} = 0.7917$$

$$\frac{B \cdot 3.1666}{3.1666} \cdot 90 = 71.25 \qquad \frac{B \cdot 2.1666}{3.1666} \cdot 90 = 48.7495$$

$$\frac{B \cdot 1.16666}{3.16666} \cdot 90 = 26.2499 \qquad \frac{B \cdot .166666}{3.166666} \cdot 90 = 3.75$$

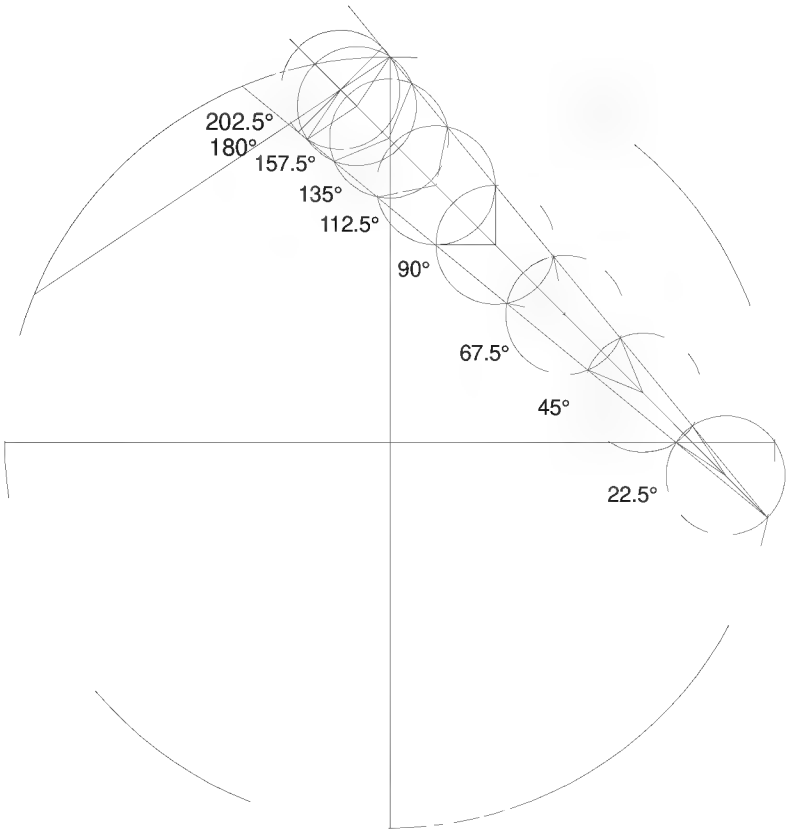
$(24 + 3) - 8 = 19$	$19 \cdot 3.75 = 71.25$
$(24 + 3) - 8 - (1 \cdot 6) = 13$	$13 \cdot 3.75 = 48.75$
$(24 + 3) - 8 - (2 \cdot 6) = 7$	$7 \cdot 3.75 = 26.25$
$(24 + 3) - 8 - (3 \cdot 6) = 1$	$1 \cdot 3.75 = 3.75$

$$\mathrm{mod}(24 + 3 - 8, 2) = 1$$

$$B := 1 + \frac{1}{8} - \frac{1}{8} + \frac{10}{8} \qquad B = 2.25 \qquad \frac{18}{8} = 2.25$$

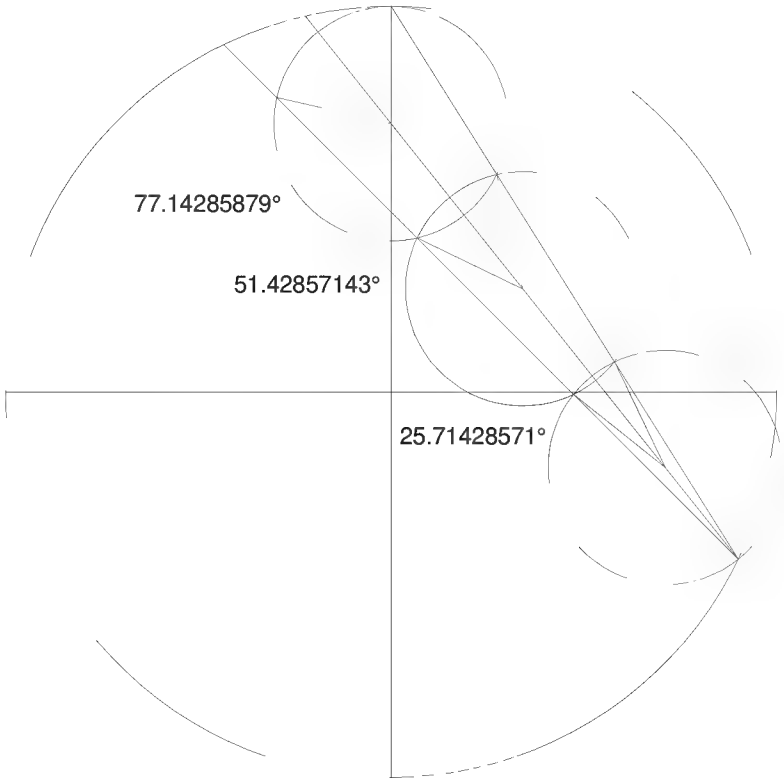
$$\frac{B \cdot 9}{9} \cdot 90 = 202.5 \qquad \frac{B \cdot 8}{9} \cdot 90 = 180$$

$$\frac{B \cdot 7}{9} \cdot 90 = 157.5 \qquad \frac{B \cdot .6}{9} \cdot 90 = 13.5$$



$8 + 1 - 1 + 10 = 18$	$18 \cdot 11.25 = 202.5$
$8 + 1 - 1 + 10 - (2 \cdot 1) = 16$	$16 \cdot 11.25 = 180$
$8 + 1 - 1 + 10 - (2 \cdot 2) = 14$	$14 \cdot 11.25 = 157.5$
$8 + 1 - 1 + 10 - (2 \cdot 3) = 12$	$12 \cdot 11.25 = 135$
$8 + 1 - 1 + 10 - (2 \cdot 4) = 10$	$10 \cdot 11.25 = 112.5$
$8 + 1 - 1 + 10 - (2 \cdot 5) = 8$	$8 \cdot 11.25 = 90$
$8 + 1 - 1 + 10 - (2 \cdot 6) = 6$	$6 \cdot 11.25 = 67.5$
$8 + 1 - 1 + 10 - (2 \cdot 7) = 4$	$4 \cdot 11.25 = 45$
$8 + 1 - 1 + 10 - (2 \cdot 8) = 2$	$2 \cdot 11.25 = 22.5$

$$\mathrm{mod}((8 + 1 - 1) + 10, 2) = 0$$



$$B := 1 + \frac{1}{7} - \frac{2}{7} \qquad B = 0.8571 \qquad \frac{6}{7} = 0.8571$$

$$\frac{B \cdot 6}{6} \cdot 90 = 77.1429 \qquad \frac{B \cdot 4}{6} \cdot 90 = 51.4286$$

$$\frac{B \cdot 2}{6} \cdot 90 = 25.7143 \qquad c := \frac{90}{7}$$

$7 + 1 - (1 \cdot 2) = 6$	$6 \cdot c = 77.1429$
$7 + 1 - (2 \cdot 2) = 4$	$4 \cdot c = 51.4286$
$7 + 1 - (3 \cdot 2) = 2$	$2 \cdot c = 25.7143$

$$\mathrm{mod}(7 + 1 - 2, 2) = 0$$

$$B := 1 + \frac{1}{7} - \frac{1}{7} \qquad B = 1 \qquad \frac{7}{7} = 1$$

$$\frac{B \cdot 7}{7} \cdot 90 = 90 \qquad \frac{B \cdot 5}{7} \cdot 90 = 64.2857$$

$$\frac{B \cdot 3}{7} \cdot 90 = 38.5714 \qquad \frac{B \cdot 1}{7} \cdot 90 = 12.8571$$

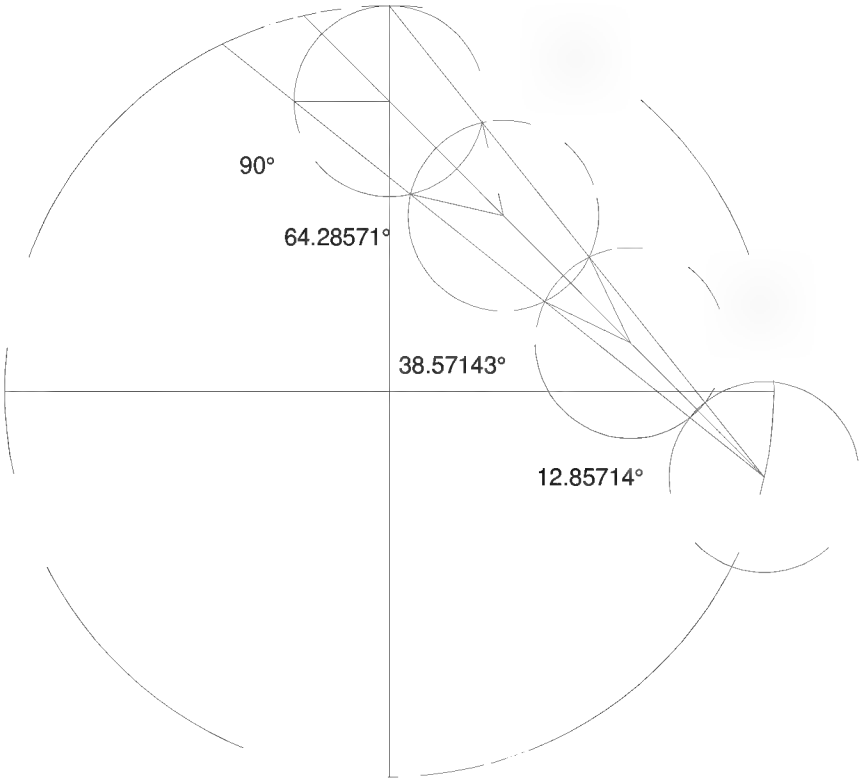
$7 + 1 - 1 = 7$ $\quad 7 \cdot c = 90$

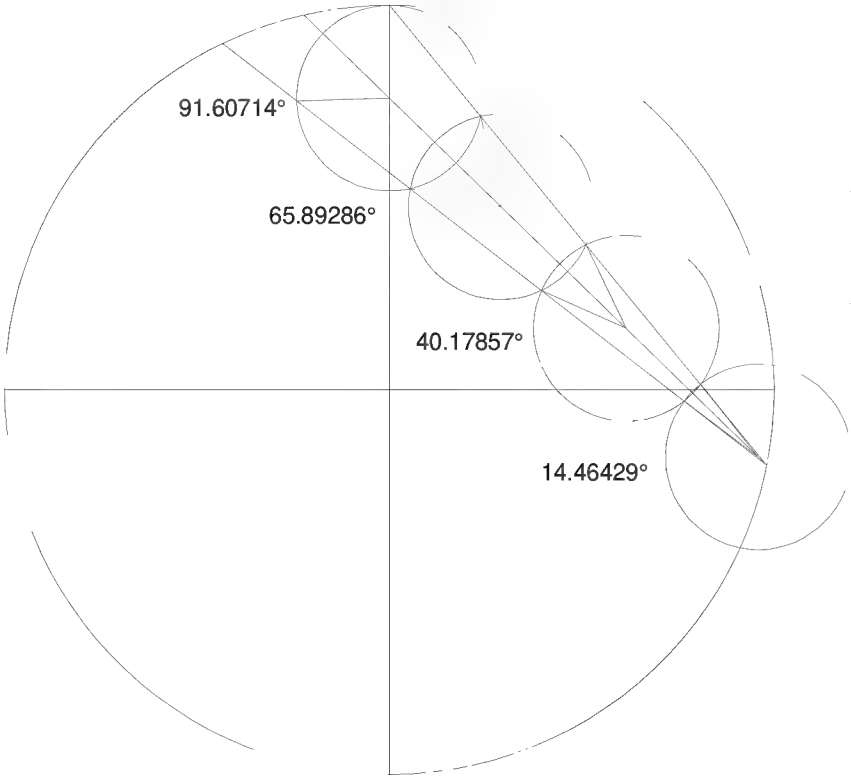
$7 + 1 - 1 - (1 \cdot 2) = 5$ $\quad 5 \cdot c = 64.2857$

$7 + 1 - 1 - (2 \cdot 2) = 3$ $\quad 3 \cdot c = 38.5714$

$7 + 1 - 1 - (3 \cdot 2) = 1$ $\quad 1 \cdot c = 12.8571$

$\mathrm{mod}(7 + 1 - 1, 2) = 1$





$$B := 1 + \frac{8}{56} - \frac{7}{56} \qquad B = 1.0179$$

$$\frac{B \cdot 57}{57} \cdot 90 = 91.6071 \qquad \frac{B \cdot 41}{57} \cdot 90 = 65.8929$$

$$\frac{B \cdot 25}{57} \cdot 90 = 40.1786 \qquad c := \frac{90}{56}$$

$56 + 8 - 7 = 57$ $\quad 57 \cdot c = 91.6071$

$56 + 8 - 7 - (1 \cdot 16) = 41$ $\quad 41 \cdot c = 65.8929$

$56 + 8 - 7 - (2 \cdot 16) = 25$ $\quad 25 \cdot c = 40.1786$

$56 + 8 - 7 - (3 \cdot 16) = 9$ $\quad 9 \cdot c = 14.4643$

$\mathrm{mod}(56 + 8 - 7, 16) = 9$

$$B := 1 + \frac{1}{7} - \frac{1}{7} \qquad B = 1$$

$$\frac{B \cdot 7}{7} \cdot 90 = 90 \qquad \frac{B \cdot 5}{7} \cdot 90 = 64.2857$$

$$\frac{B \cdot 3}{7} \cdot 90 = 38.5714 \qquad \frac{B \cdot 1}{7} \cdot 90 = 12.8571$$

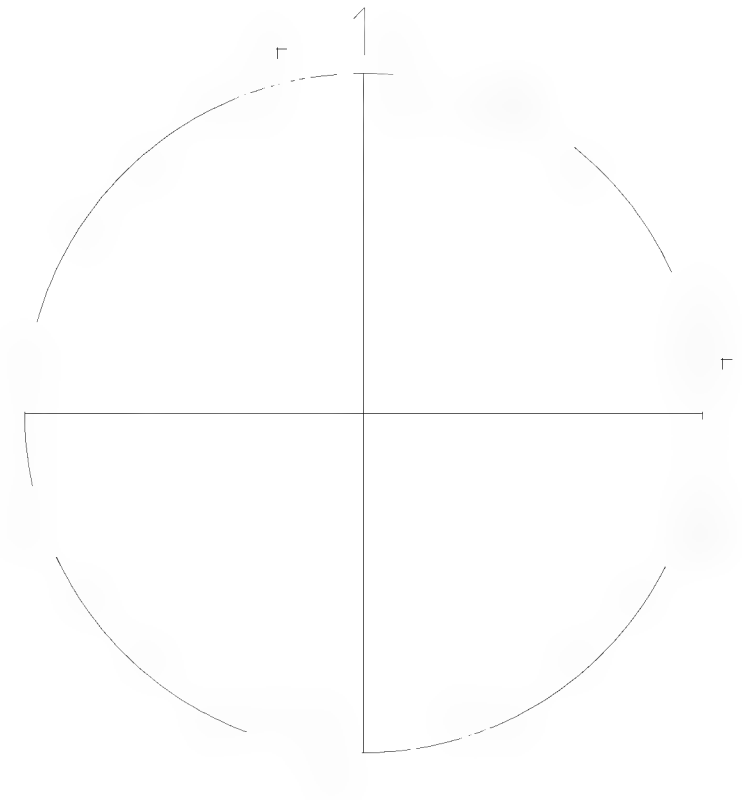
$$7 + 1 - 1 = 7$$

$$7 + 1 - 1 - (1 \cdot 2) = 5$$

$$7 + 1 - 1 - (2 \cdot 2) = 3$$

$$7 + 1 - 1 - 2 - 2 - 2 = 1$$

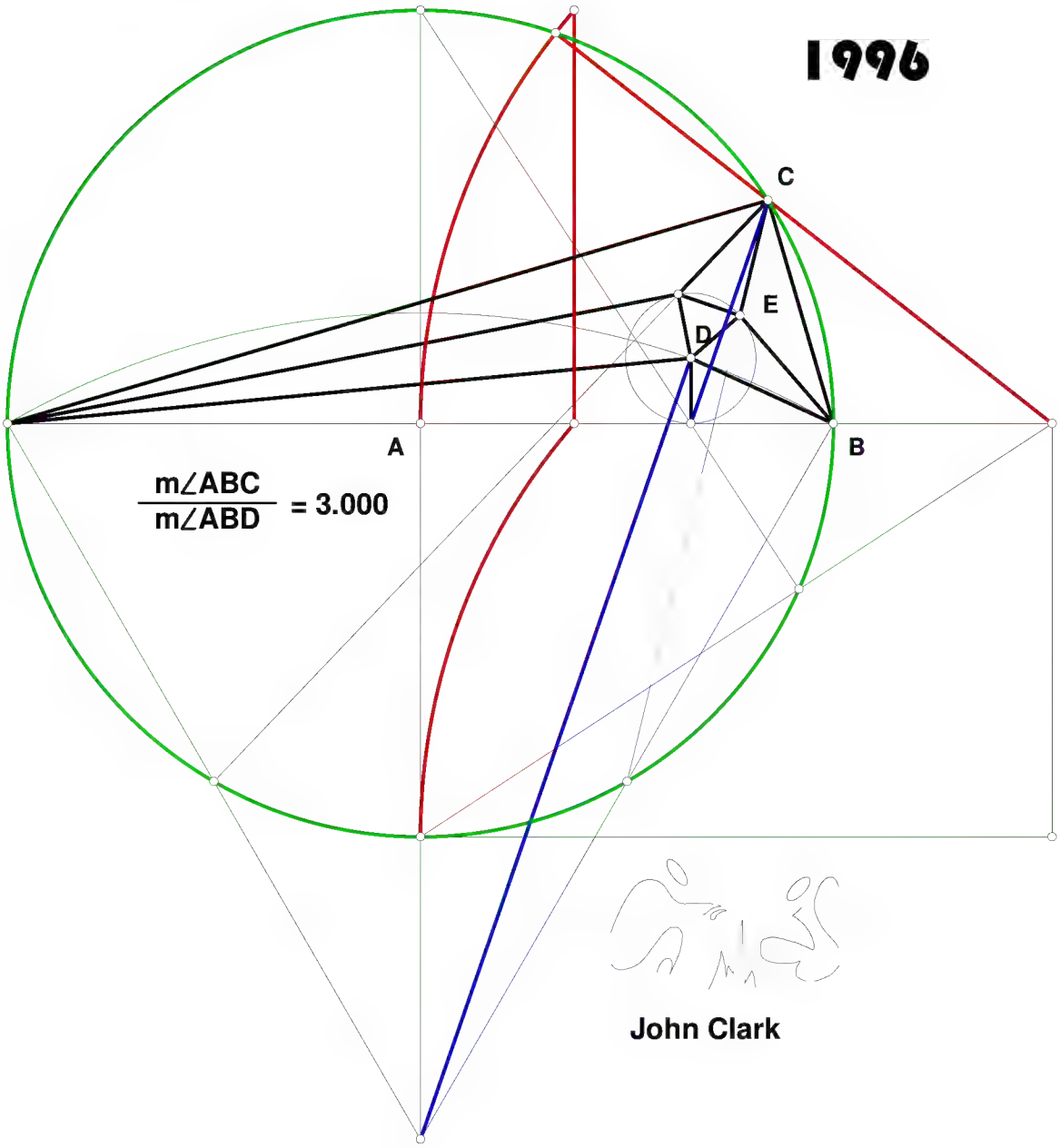
$$\mathrm{mod}(7 + 1 - 1, 2) = 1$$



Work in progress.

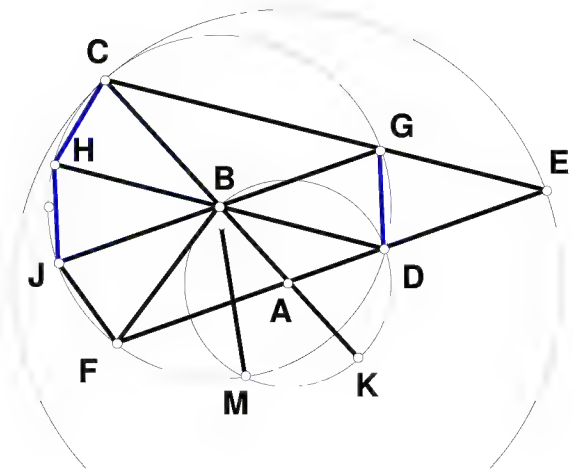
Three Pieces Of Paper

1996



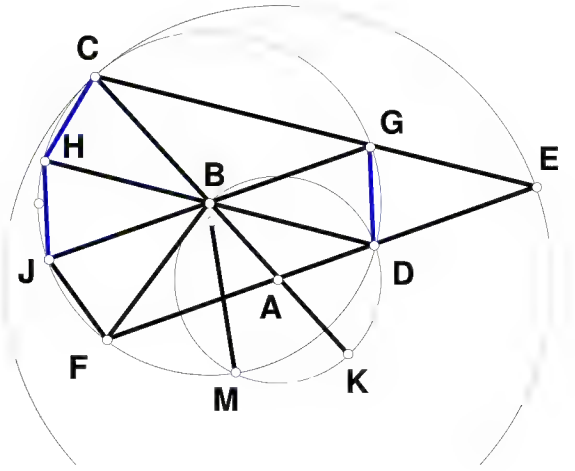
John Clark

010496 The Archamedian Paper Trisector- Without the Numbers.



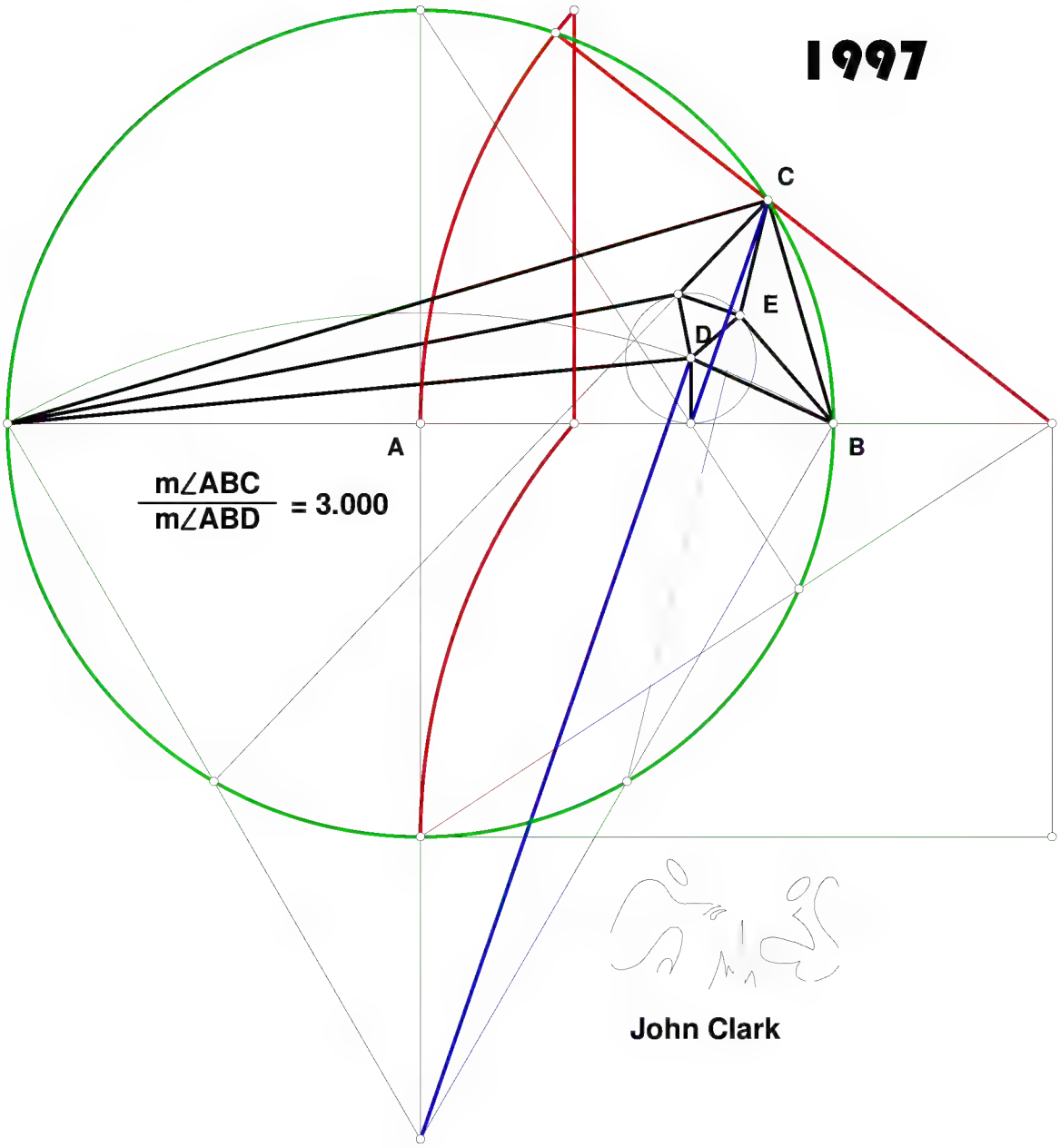
Given any circle AB.
Given any circle BC such that BC ≤ 2AB.
Construct AE such that AE = AC.
As AC = AB + BC
and AD = AB so too DE = BC.
Construct DH parallel to BD.
Construct CE.
As AB = AD and AC = AE,
Δ ABD is proportional to Δ ACE,
therefore CE is parallel to BD.
From here one can take two paths.
Construct GJ parallel to EF.
As CE is parallel to DH,
DG = CH.
As GJ is parallel to EF,
DG = FJ.

As ∠ HBJ is opposite
and equal to ∠ GBD,
DG = HJ,
therefore ∠ DG is $\frac{1}{3}$ CF.
As CE is parallel to DH
and EF is parallel to GJ,
EGBD is equilateral.
By construction DK = KM.
As DH is parallel to CE,
CH = DG.
As DK is equal and opposite CH,
MK + DK + DG is $\frac{1}{3}$ DG.



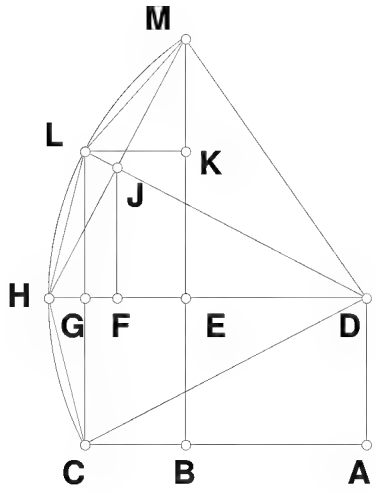
Three Pieces Of Paper

1997



John Clark

042897



$N := 1.458 \quad AD := 1 \qquad AC := AD \cdot N \qquad N := N$

$CD := \sqrt{AD^2 + AC^2} \quad DH := CD$

$CG := AD \;\; DG := AC \;\; GH := DH - DG \; CH := \sqrt{GH^2 + CG^2}$

$HJ := CG \;\; DJ := DG$

$FH := \dfrac{\left(HJ^2 + DH^2\right) - DJ^2}{2 \cdot DH} \quad EF := FH \quad DE := DH - (EF + FH)$

$AB := DE \quad EG := DG - DE \; LM := CH \quad LK := EG$

$KM := \sqrt{LM^2 - LK^2} \quad BE := AD \quad BK := 2 \cdot BE \quad BM := BK + KM$

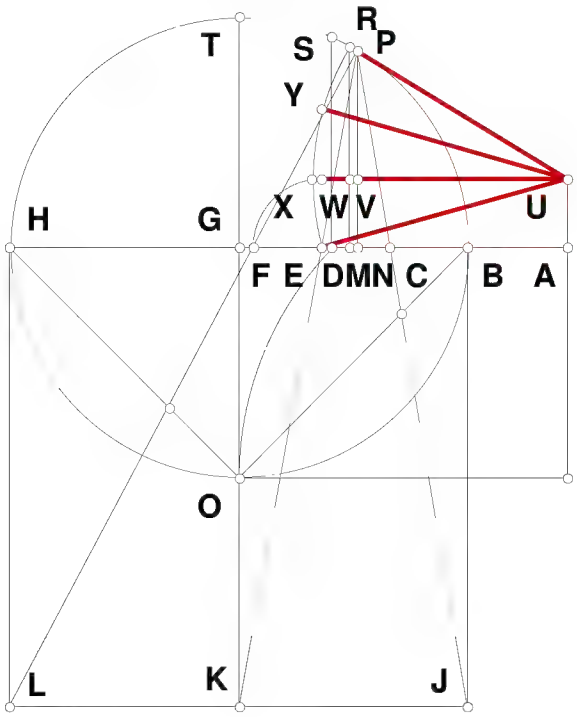
Some Algebraic Names:

$\sqrt{N^2 + 1} - CD = 0 \qquad N - AC = 0 \qquad \sqrt{N^2 + 1} - N - GH = 0 \qquad \sqrt{2 \cdot N^2 - 2 \cdot \sqrt{N^2 + 1} \cdot N + 2} - CH = 0$

$\dfrac{1}{\sqrt{N^2 + 1}} - FH = 0 \qquad \dfrac{(N - 1) \cdot (N + 1)}{\sqrt{N^2 + 1}} - AB = 0 \qquad 2 + \sqrt{\dfrac{5 \cdot N^2}{N^2 + 1} - \dfrac{4 \cdot N}{\sqrt{N^2 + 1}} + \dfrac{1}{N^2 + 1}} - BM = 0$

Trisection and the Cube Roots 042997

If trisection can be placed at RUE, then PV is proportional to RW.



$N := 5 \qquad AB := 1 \qquad AH := AB \cdot N$

$BH := AH - AB \quad BJ := BH$

$AC := \left(AB^2 \cdot AH\right)^{\frac{1}{3}} \qquad AF := \left(AB \cdot AH^2\right)^{\frac{1}{3}}$

$CF := AF - AC \qquad CE := \frac{CF}{2}$

$AE := AC + CE$

$AU := CE \quad NV := AU \quad MW := AU$

(For the next two equations see 042897.)

$$AM := \frac{\left(\frac{AE}{AU} - 1\right) \cdot \left(\frac{AE}{AU} + 1\right) \cdot AU}{\sqrt{\left(\frac{AE}{AU}\right)^2 + 1}}$$

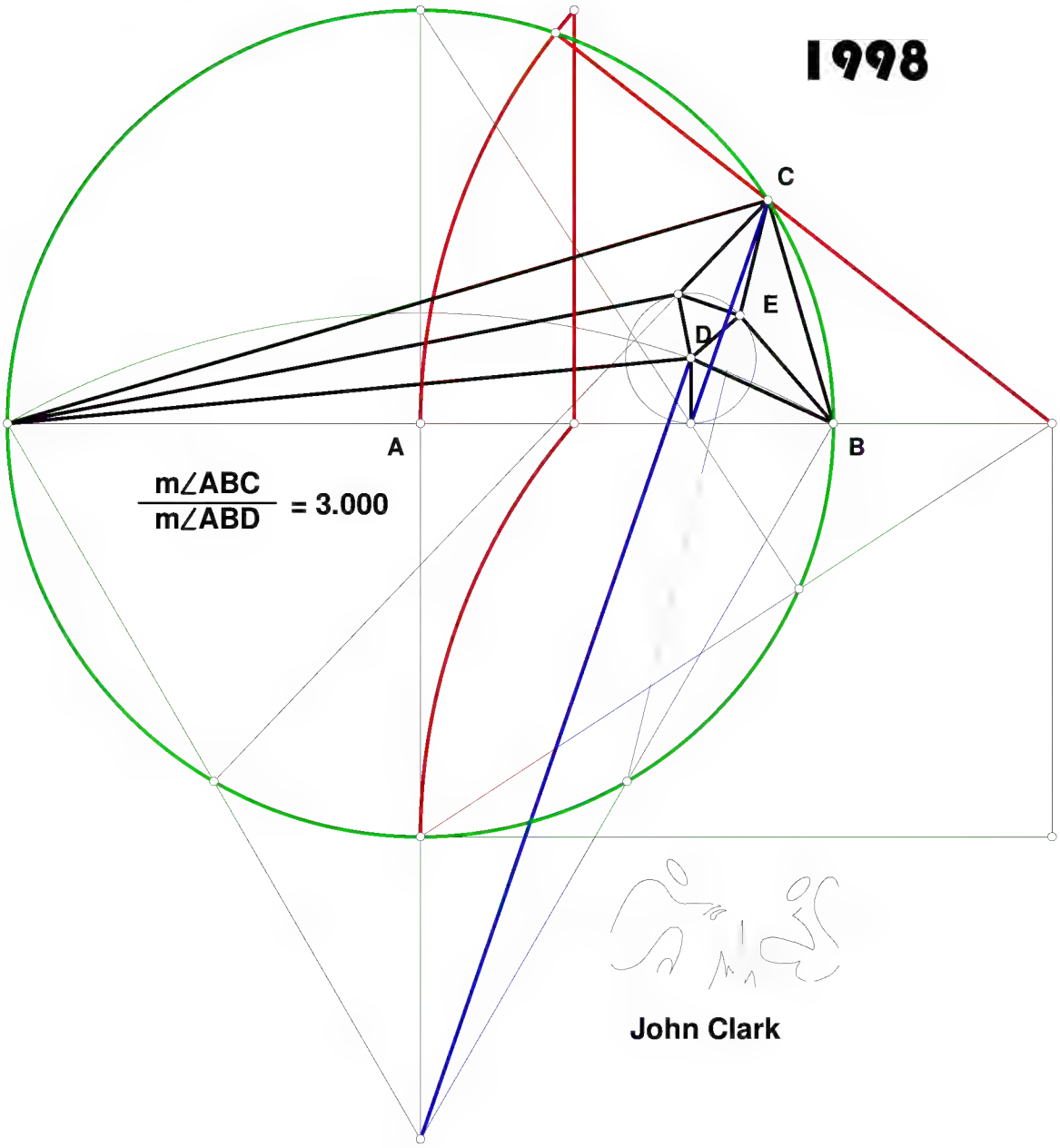
$$MR := 2 \cdot AU + AU \cdot \sqrt{\frac{5 \cdot \left(\frac{AE}{AU}\right)^2}{\left(\frac{AE}{AU}\right)^2 + 1} - \frac{4 \cdot \frac{AE}{AU}}{\sqrt{\left(\frac{AE}{AU}\right)^2 + 1}} + \frac{1}{\left(\frac{AE}{AU}\right)^2 + 1}} \qquad RW := MR - MW$$

$BC := AC - AB \qquad FH := AH - AF \quad CN := \frac{BC \cdot CF}{BC + FH} \quad NP := \frac{BJ \cdot CN}{BC} \qquad PV := NP - NV$

$AN := AC + CN \qquad UV := AN \quad UW := AM \qquad \frac{RW \cdot UV}{UW} - PV = 0$

Three Pieces Of Paper

1998



John Clark

m∠OKL = 30.872°

m∠HAQ = 20.581°

m∠OTK = 15.436°

m∠IJV = 10.291°

m∠IBJ = 5.145°

▲ Show

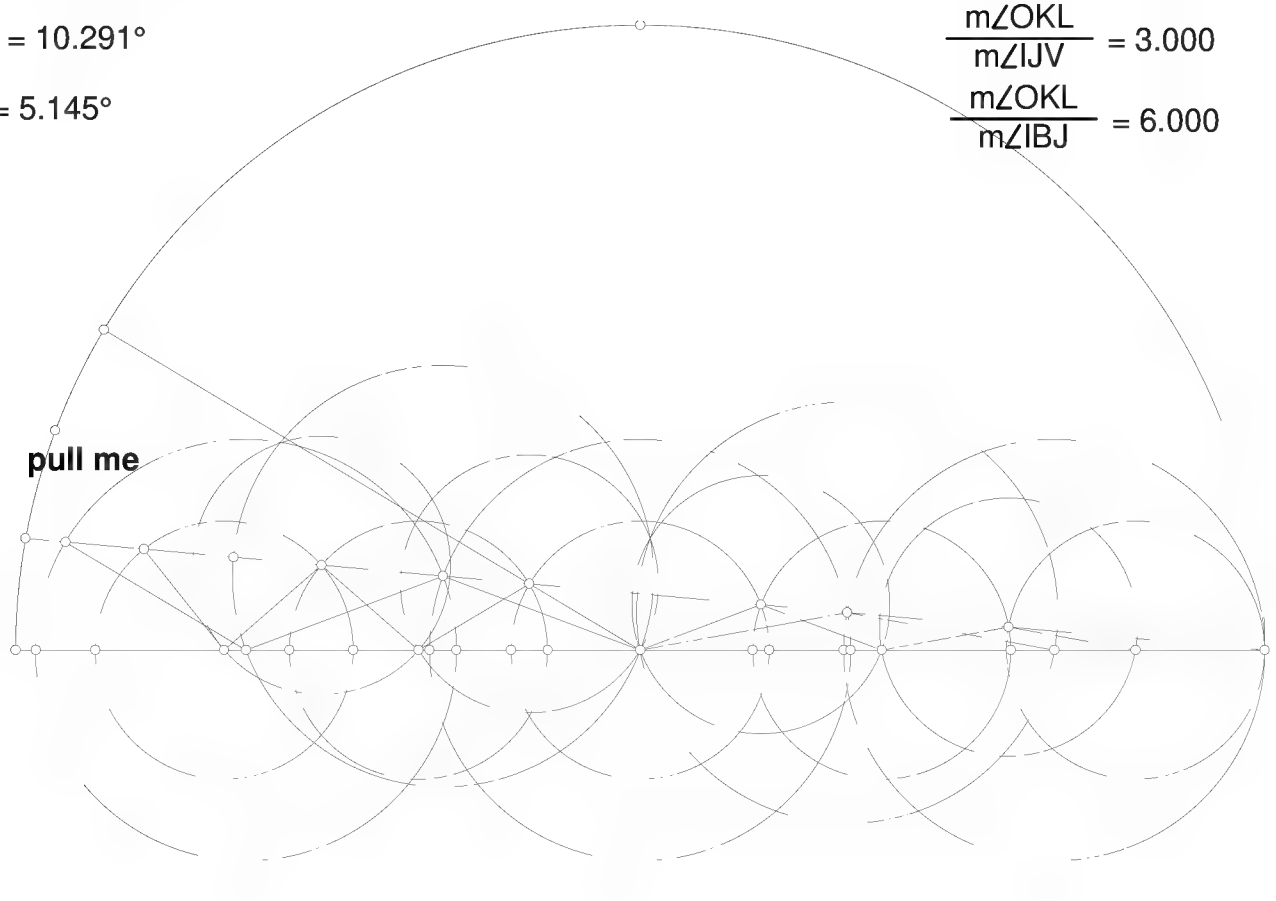
△ Hide

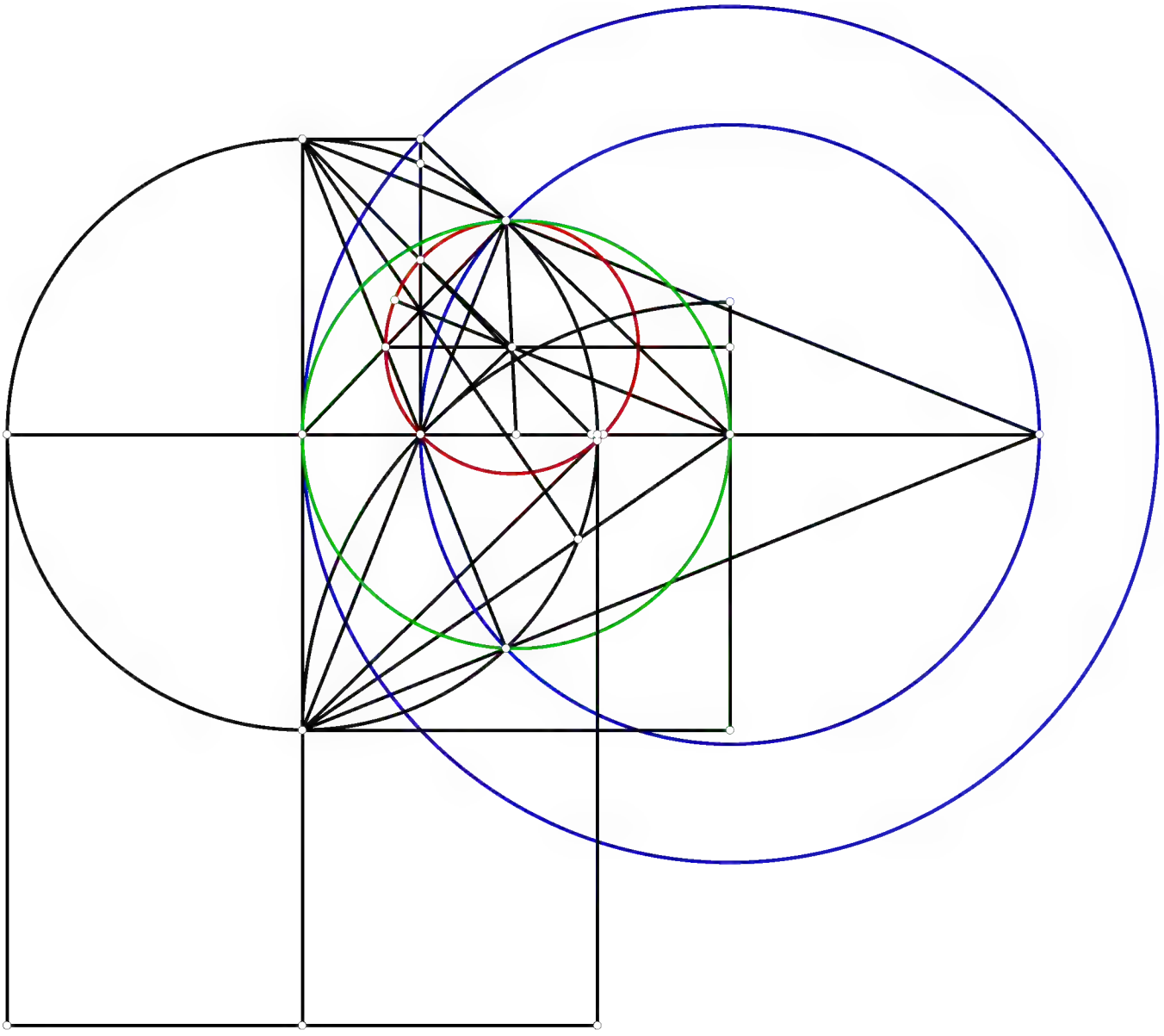
$\frac{m\angle OKL}{m\angle HAQ} = 1.500$

$\frac{m\angle OKL}{m\angle OTK} = 2.000$

$\frac{m\angle OKL}{m\angle IJV} = 3.000$

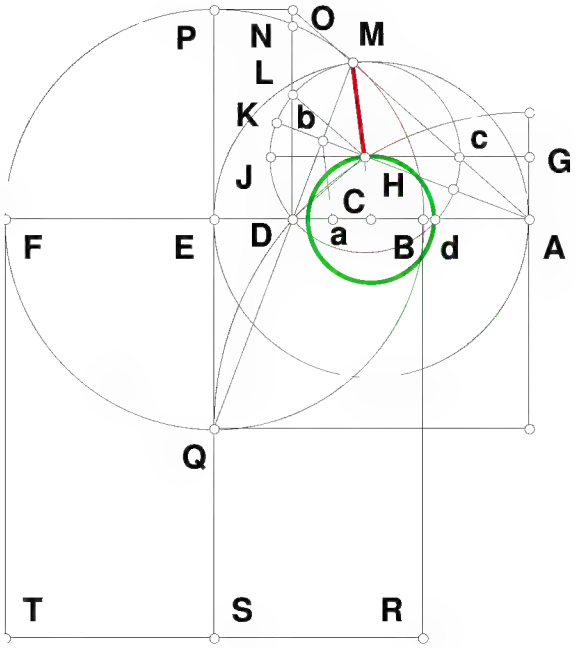
$\frac{m\angle OKL}{m\angle IBJ} = 6.000$





A Square Root Figure And Triseciton 042398

In this square root figure, what is the radius of the circle with the trisected angle? What is the radius CH?



$N := 5 \quad AB := 1 \quad AF := AB \cdot N \quad BF := AF - AB$

$AD := (AB \cdot AF)^{\frac{1}{2}} \quad BE := \frac{BF}{2} \quad BD := AD - AB$

$DE := BE - BD \quad EQ := BE \quad DQ := \left(DE^2 + EQ^2\right)^{\frac{1}{2}}$

$PQ := BF \quad QM := \frac{EQ \cdot PQ}{DQ} \quad DM := QM - DQ$

$AE := AB + BE \quad AC := \frac{AE}{2} \quad Db := \frac{DM}{2}$

$CM := AC \quad ab := \frac{CM \cdot Db}{DM} \quad CD := AD - AC$

$Ca := \frac{CD}{2} \quad Aa := AC + Ca \quad CH := \frac{ab \cdot AC}{Aa}$

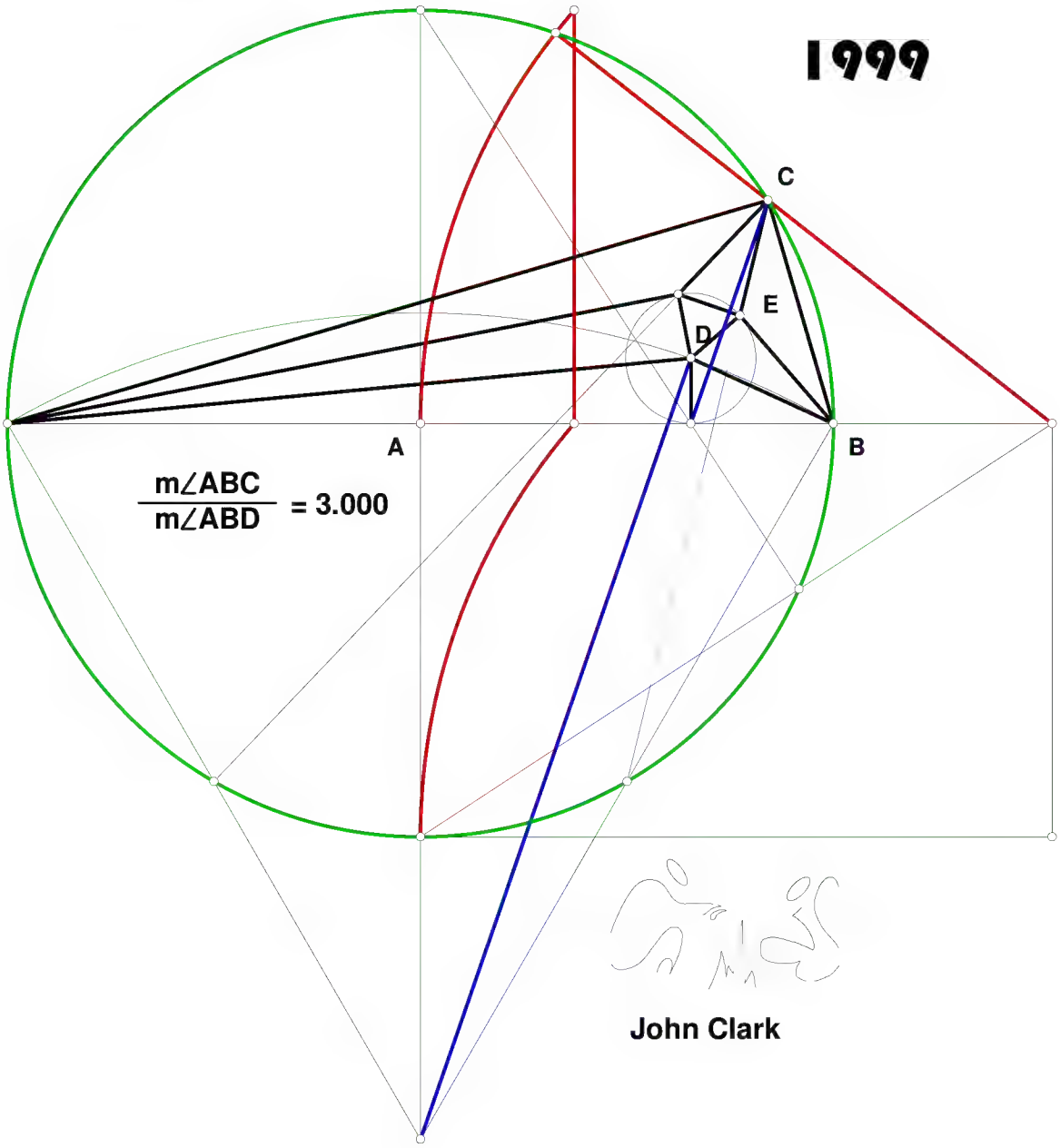
$AM := AD \quad Ac := \frac{AM \cdot CH}{CM} \quad HM := CM - CH$

$HM - Ac = 0$

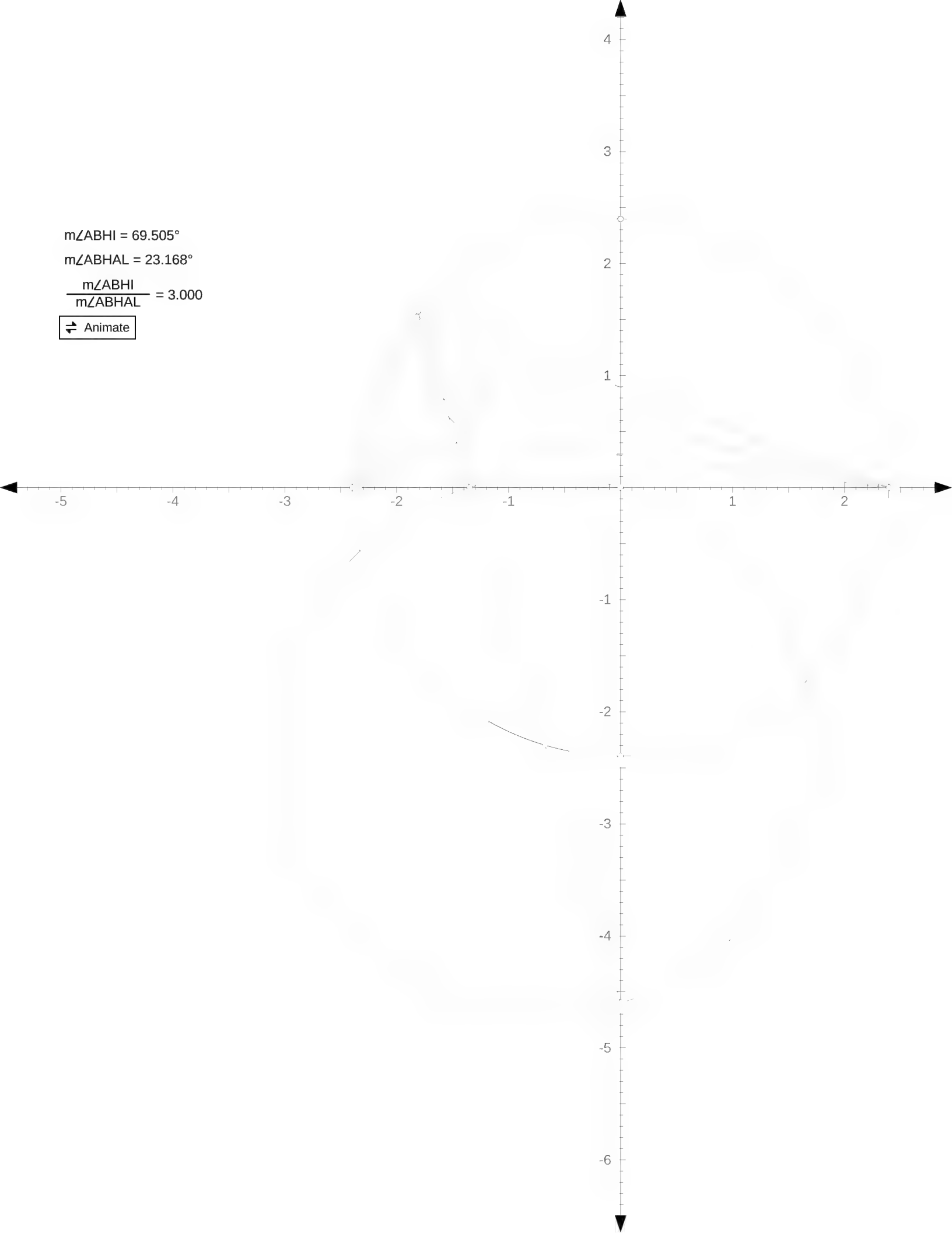
$$HM - AB \cdot \frac{\sqrt{N} \cdot (N+1)}{N + 4 \cdot \sqrt{N} + 1} = 0 \qquad CH - AB \cdot \frac{(N+1)^2}{4 \cdot N + 16 \cdot \sqrt{N} + 4} = 0$$

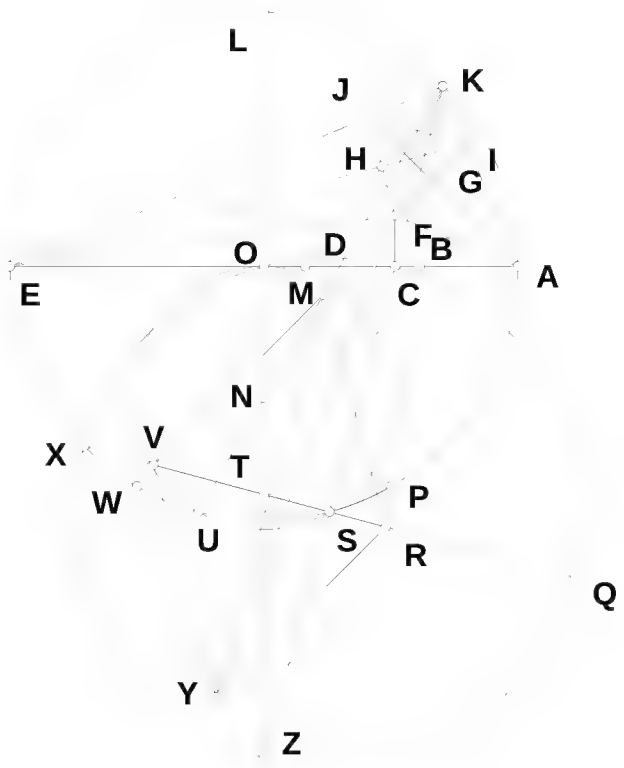
Three Pieces Of Paper

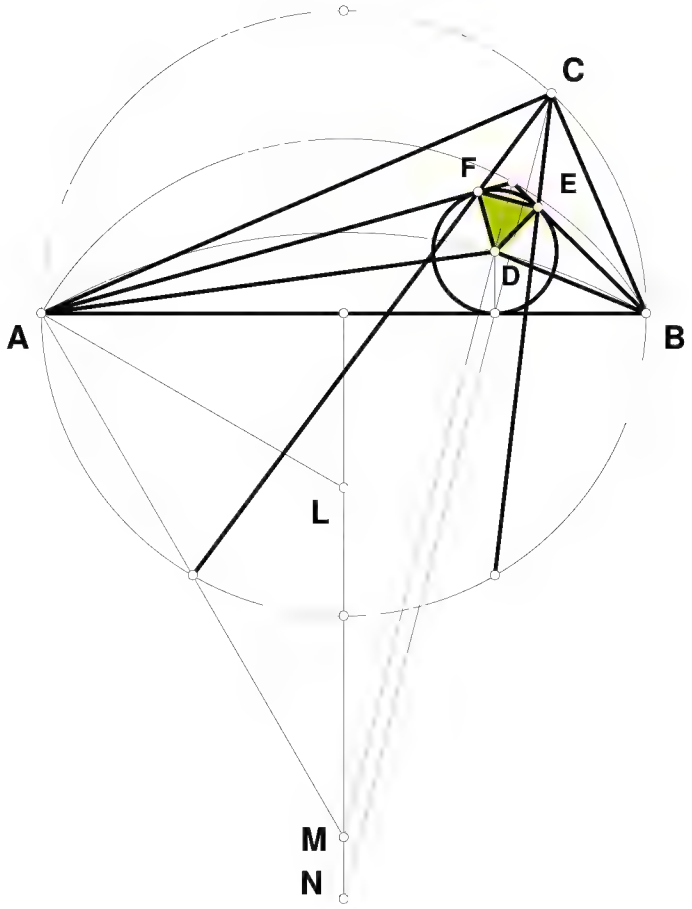
1999



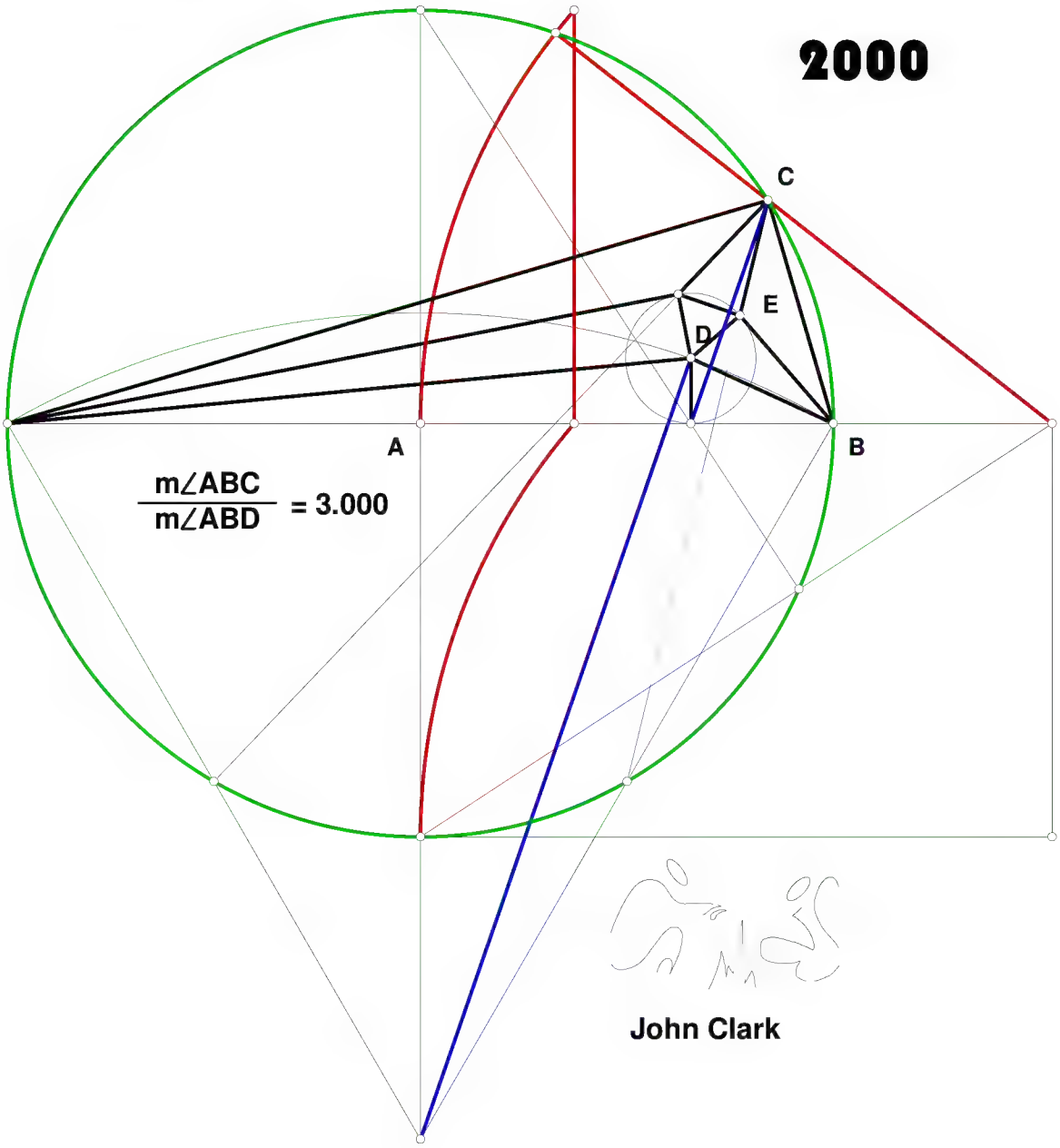
John Clark


m∠ABHI = 69.505°
m∠ABHAL = 23.168°
m∠ABHI / m∠ABHAL = 3.000
Animate
4
3
2
1
-1
-2
-3
-4
-5
-6
-5
-4
-3
-2
-1
1
2


L
J
K
H
I
G
F
B
O
D
A
E
M
C
N
V
X
T
W
P
U
S
R
Q
Y
Z

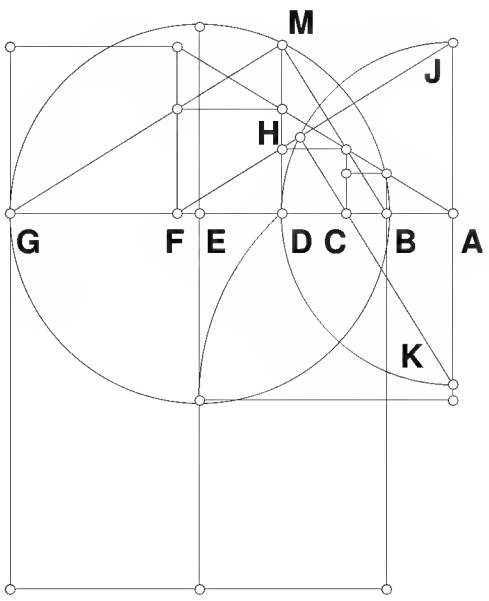

C
F
E
D
A
B
L
M
N

Three Pieces Of Paper



John Clark

07/09/00 Alternate Method Quad Roots



$N := 3 \quad AB := 1 \quad AG := AB \cdot N \quad AD := \sqrt{AB \cdot AG}$

$BD := AD - AB \quad BG := AG - AB$

$DG := BG - BD \quad DM := \sqrt{BD \cdot DG}$

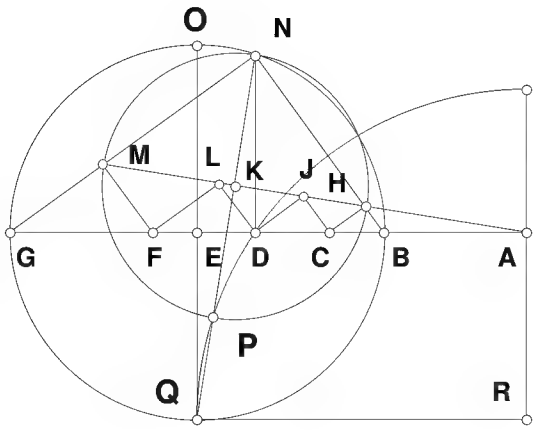
$AJ := AD \quad AK := AD \quad BM := \sqrt{BD^2 + DM^2}$

$GM := \sqrt{DG^2 + DM^2} \quad AF := \frac{GM \cdot AJ}{BM}$

$AC := \frac{BM \cdot AK}{GM}$

$(AB \cdot AG^3)^{\frac{1}{4}} - AF = 0 \quad (AB^3 \cdot AG)^{\frac{1}{4}} - AC = 0$

08/01/00 Alternate Method Quad Roots



$N := 5 \qquad AB := 1 \qquad AG := AB \cdot N$

$BG := AG - AB \qquad BE := \frac{BG}{2} \qquad AD := \sqrt{AB \cdot AG}$

$AE := AB + BE \qquad DE := AE - AD \qquad NY := DE$

$BD := AD - AB \qquad DG := BG - BD \qquad EQ := BE$

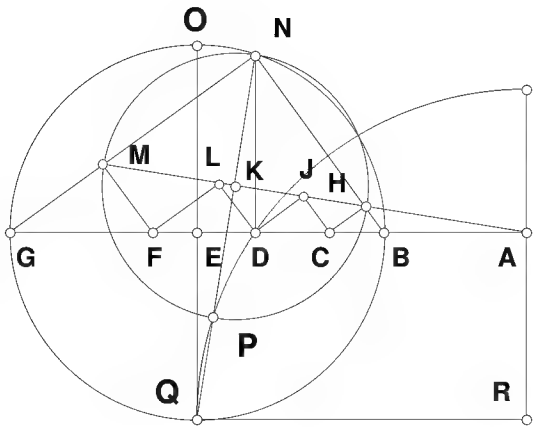
$DN := \sqrt{BD \cdot DG} \qquad NQ := \sqrt{DE^2 + (DN + EQ)^2}$

$QR := AE \qquad OQ := BG \qquad NO := \sqrt{OQ^2 - NQ^2}$

$PQ := \frac{NO \cdot 2 \cdot QR}{OQ} \qquad NP := NQ - PQ \qquad MN := \sqrt{\frac{NP^2}{2}} \qquad BN := \sqrt{BD^2 + DN^2} \qquad GN := \sqrt{DG^2 + DN^2}$

$GM := GN - MN \qquad FG := \frac{BG \cdot GM}{GN} \qquad AF := AG - FG \qquad \left(AB \cdot AG^3\right)^{\frac{1}{4}} - AF = 0$

08/01/00B Alternate Method Quad Roots



$N := 5 \qquad AB := 1 \qquad AG := AB \cdot N$

$BG := AG - AB \qquad BE := \frac{BG}{2} \qquad AD := \sqrt{AB \cdot AG}$

$BD := AD - AB \qquad DG := BG - BD \qquad EQ := BE$

$DN := \sqrt{BD \cdot DG} \qquad BN := \sqrt{BD^2 + DN^2}$

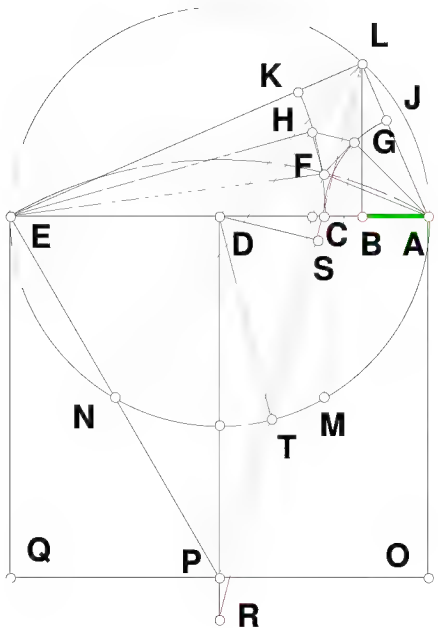
$GN := \sqrt{DG^2 + DN^2} \qquad DE := BE - BD$

$NQ := \sqrt{(DN + EQ)^2 + DE^2} \qquad AN := \sqrt{AD^2 + DN^2} \qquad AE := AB + BE \qquad AQ := \sqrt{AE^2 + EQ^2}$

$KN := \frac{NQ^2 + AN^2 - AQ^2}{2 \cdot NQ} \qquad KM := KN \qquad MN := \sqrt{KN^2 + KM^2} \qquad GM := GN - MN \qquad GF := \frac{BG \cdot GM}{GN}$

$AF := AG - GF \qquad \left(AB \cdot AG^3\right)^{\frac{1}{4}} - AF = 0$

In Trisection What Is AB? 08/02/00



In the trisection figure given and given AC as the Unit what is AB?

$AC := .884 \quad AE := 3.521 \quad AD := \frac{AE}{2}$

$EP := AE \quad DE := AD \quad DP := \sqrt{EP^2 - DE^2} \quad FP := EP$

$CE := AE - AC \quad CD := CE - DE \quad CF := \sqrt{FP^2 - CD^2} - DP$

$PR := CF \quad DR := DP + PR \quad CR := \sqrt{CD^2 + DR^2}$

$CS := \frac{CD^2}{CR} \quad DS := \sqrt{CD^2 - CS^2} \quad DL := AD$

$LS := \sqrt{DL^2 - DS^2} \quad RS := CR - CS \quad LR := RS + LS$

$BD := \frac{CD \cdot LR}{CR} \quad AB := AD - BD \quad ST := LS \quad RT := RS - ST$

In trisection the length RT to the similarity point is equal to the radius of the circle.

$$RT - \left(\frac{1}{2}\right) \cdot AE = 0$$

$$AD - \frac{AE}{2} = 0 \qquad DP - \frac{AE}{2} \cdot \sqrt{3} = 0 \qquad CF - \left[\frac{1}{2} \cdot \sqrt{-(AE + 2 \cdot AC) \cdot (-3 \cdot AE + 2 \cdot AC)} - \frac{1}{2} \cdot AE \cdot \sqrt{3}\right] = 0$$

$$CE - (AE - AC) = 0 \qquad CD - \left(\frac{1}{2} \cdot AE - AC\right) = 0 \qquad DR - \frac{1}{2} \cdot \sqrt{(AE + 2 \cdot AC) \cdot (3 \cdot AE - 2 \cdot AC)} = 0$$

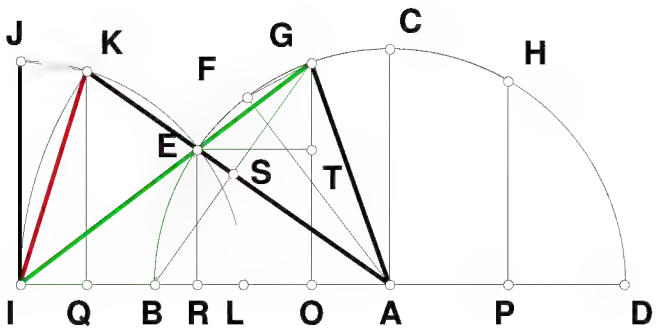
$$CR - AE = 0 \qquad CS - \left(\frac{1}{4}\right) \cdot \frac{(-AE + 2 \cdot AC)^2}{AE} = 0 \qquad LS - \frac{1}{4} \cdot \frac{\left(-4 \cdot AC^2 + 4 \cdot AE \cdot AC + AE^2\right)}{AE} = 0$$

$$DS - \frac{1}{4} \cdot \frac{(AE - 2 \cdot AC)}{AE} \cdot \sqrt{(AE + 2 \cdot AC) \cdot (3 \cdot AE - 2 \cdot AC)} = 0 \qquad LR - \frac{\left(AE^2 - 2 \cdot AC^2 + 2 \cdot AE \cdot AC\right)}{AE} = 0$$

$$RS - \frac{1}{4} \cdot (AE + 2 \cdot AC) \cdot \frac{(3 \cdot AE - 2 \cdot AC)}{AE} = 0 \qquad BD - \left(\frac{1}{2} \cdot AE - \frac{3}{AE} \cdot AC^2 + \frac{2}{AE^2} \cdot AC^3\right) = 0$$

$$AB - AC^2 \cdot \frac{(3 \cdot AE - 2 \cdot AC)}{AE^2} = 0 \qquad AB \cdot AE^2 - AC^2 \, (3 \cdot AE - 2 \cdot AC) = 0$$

080300 Trisection



If 2 IQ = EK then 2 JK = EK and the figure projected from BCD will yeild a trisected figure JKL.

$N := 3 \qquad BD := 2$

$AB := \frac{BD}{2} \quad AD := AB \quad AP := \frac{AD}{2}$

$BP := AB + AP \quad BO := \frac{BP}{N} \quad AE := AB$

$DO := BD - BO \quad GO := \sqrt{BO \cdot DO}$

$BG := \sqrt{GO^2 + BO^2} \quad BS := \frac{BG}{2} \quad ER := BS \quad TO := ER \quad GT := GO - TO \quad AS := \sqrt{AB^2 - BS^2}$

$ES := AE - AS \quad BR := ES \quad OR := BO - BR \quad ET := OR \quad IO := \frac{ET \cdot GO}{GT} \quad BI := IO - BO$

$AI := BI + AB \quad BE := \sqrt{ER^2 + BR^2} \quad GE := BE \quad GI := \frac{GE \cdot GO}{GT} \quad EI := GI - GE \quad AK := AI \quad IK := EI$

$IQ := \frac{IK^2 + AI^2 - AK^2}{2 \cdot AI} \quad EK := AK - AE \quad \frac{EK}{IQ} = 2$

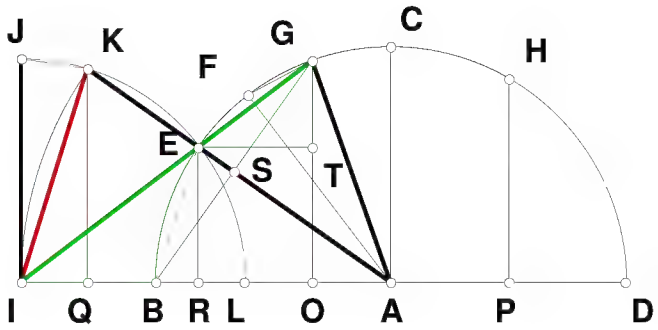
Some Algebraic Names:

$$\frac{3 \cdot BD}{4 \cdot N} - BO = 0 \qquad \frac{BD}{4} \cdot \frac{(4 \cdot N - 3)}{N} - DO = 0 \qquad \frac{BD}{(4 \cdot N)} \cdot \sqrt{3} \cdot \sqrt{4 \cdot N - 3} - GO = 0 \qquad \frac{BD}{2} \cdot \sqrt{3} \cdot \sqrt{\frac{1}{N}} - BG = 0$$

$$\frac{BD}{4} \cdot \sqrt{3} \cdot \sqrt{\frac{1}{N}} - BS = 0 \qquad \frac{BD}{4} \cdot \sqrt{3} \cdot \frac{\left(\sqrt{4 \cdot N - 3} - \sqrt{\frac{1}{N}} \cdot N\right)}{N} - GT = 0 \qquad \frac{BD}{4} \cdot \sqrt{\frac{(4 \cdot N - 3)}{N}} - AS = 0$$

$$\frac{BD}{4} \cdot \left[2 - \sqrt{\frac{(4 \cdot N - 3)}{N}}\right] - ES = 0 \qquad \frac{BD}{4} \cdot \frac{\left[3 - 2 \cdot N + \sqrt{\frac{(4 \cdot N - 3)}{N}} \cdot N\right]}{N} - OR = 0$$

$$\frac{-BD}{4} \cdot \frac{\left[3 \cdot \sqrt{4 \cdot N - 3} \cdot \sqrt{N} - 2 \cdot \sqrt{4 \cdot N - 3} \cdot N^{\left(\frac{3}{2}\right)} + 4 \cdot N^2 - 3 \cdot N\right]}{\left[N^{\left(\frac{3}{2}\right)} \cdot \left(-\sqrt{4 \cdot N - 3} + \sqrt{N}\right)\right]} - IO = 0 \qquad \frac{-BD}{2} \cdot \frac{\left(\sqrt{4 \cdot N - 3} - 2 \cdot \sqrt{N}\right)}{\left(\sqrt{4 \cdot N - 3} - \sqrt{N}\right)} - BI = 0$$



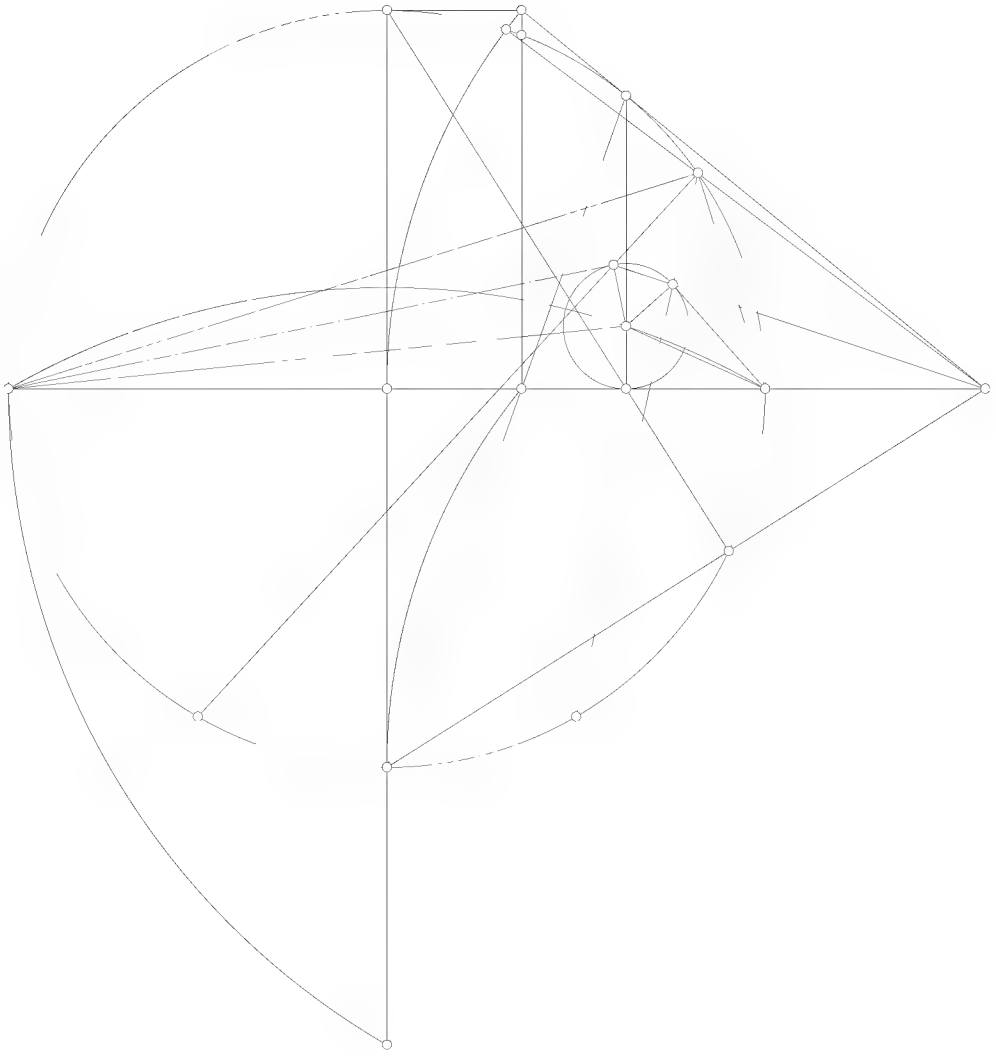
$$\frac{-BD}{\left(-2\cdot\sqrt{4\cdot N-3}+2\cdot\sqrt{N}\right)}\cdot\sqrt{N}-AI=0$$

$$\frac{BD}{2}\cdot\sqrt{2-\frac{1}{\sqrt{N}}\cdot\sqrt{4\cdot N-3}}-BE=0$$

$$\frac{BD}{2}\cdot\sqrt{\frac{-\left(-2\cdot\sqrt{N}+\sqrt{4\cdot N-3}\right)}{\sqrt{N}}}\cdot\frac{\sqrt{4\cdot N-3}}{\left(\sqrt{4\cdot N-3}-\sqrt{N}\right)}-GI=0$$

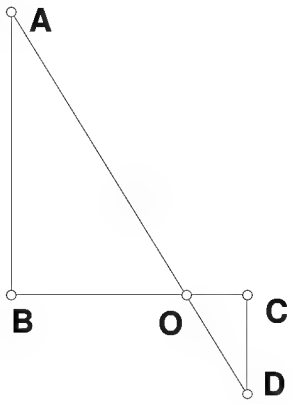
$$\frac{-BD}{2}\cdot\sqrt{2-\frac{\sqrt{4\cdot N-3}}{\sqrt{N}}}\cdot\frac{\sqrt{N}}{\left(-\sqrt{4\cdot N-3}+\sqrt{N}\right)}-EI=0$$

$$\frac{BD}{4}\cdot\frac{\left(2\cdot\sqrt{N}-\sqrt{4\cdot N-3}\right)}{\left(\sqrt{4\cdot N-3}-\sqrt{N}\right)}-IQ=0\qquad\frac{BD}{2}\cdot\frac{\left(2\cdot\sqrt{N}-\sqrt{4\cdot N-3}\right)}{\left(\sqrt{4\cdot N-3}-\sqrt{N}\right)}-EK=0$$



08/07/00 Proportion Series II

Two unknowns have the same proportion as two givens and the sum of the unknowns are known. Find the two unknowns.



$AB := 9 \quad CD := 3 \quad BC := 5$

$BO := \frac{AB \cdot BC}{AB + CD} \quad CO := \frac{CD \cdot BC}{AB + CD}$

$BO = 3.75 \quad CO = 1.25$

$BO + CO - BC = 0$

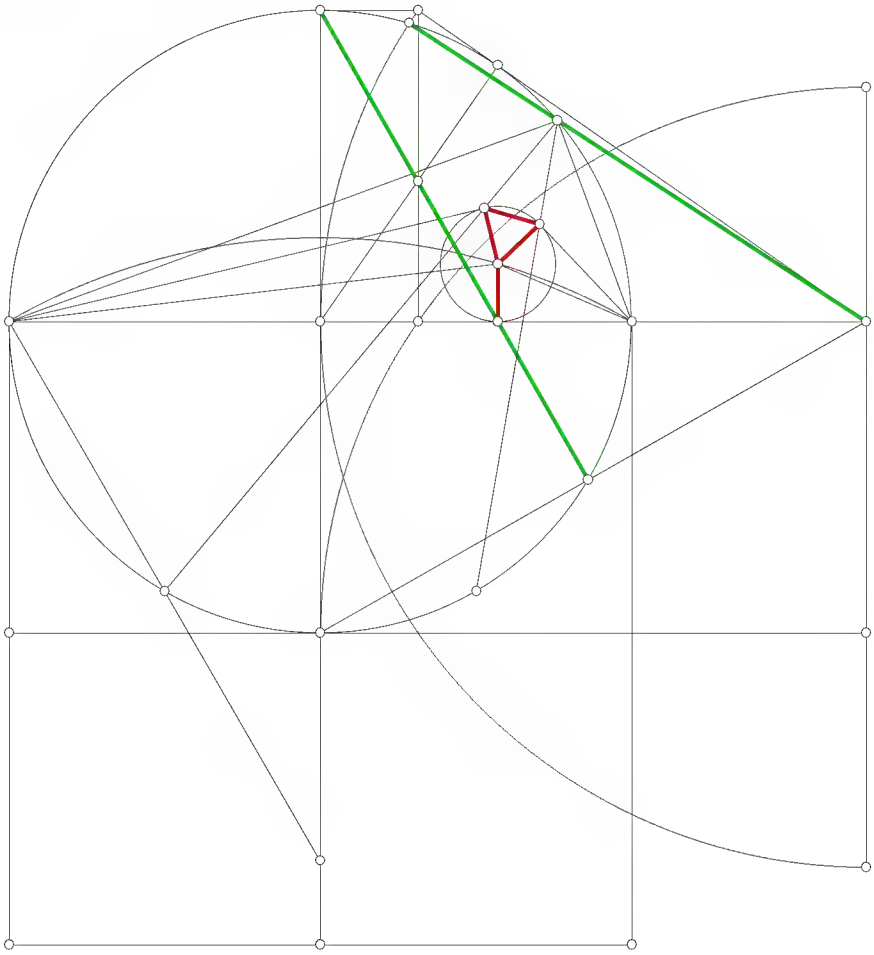
$\frac{AB}{CD} - \frac{BO}{CO} = 0$

$m\angle UDG = 69.867°$

$m\angle UDCI = 23.289°$

$\frac{m\angle UDG}{m\angle UDCI} = 3.000$

Trisection and the square root figure.

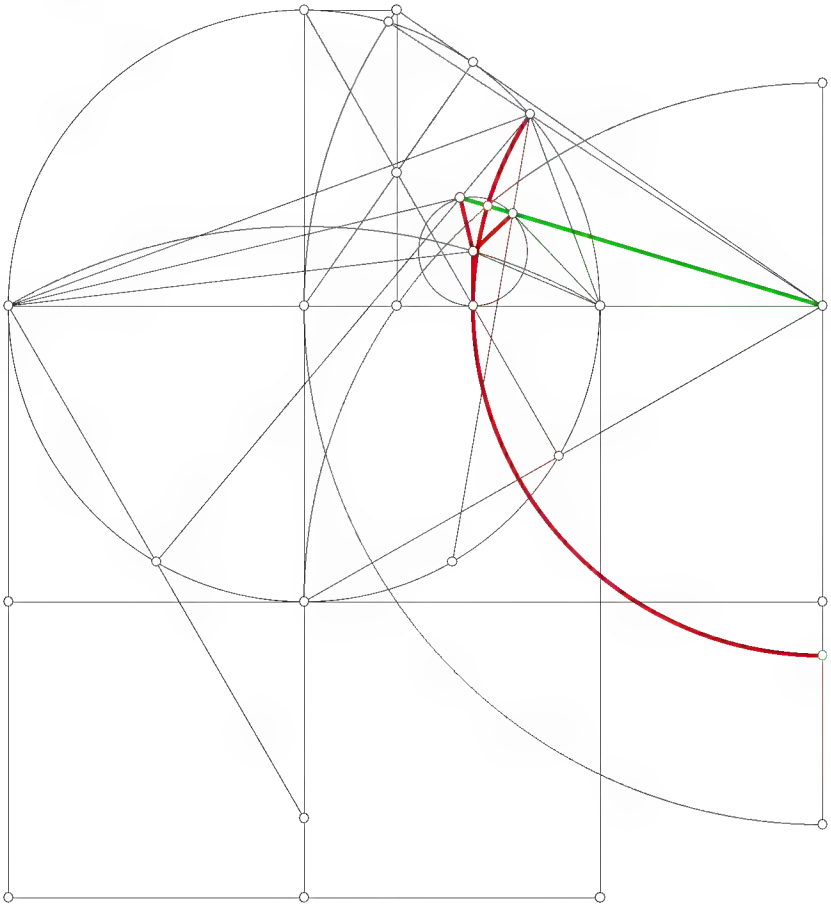


$m\angle UDG = 69.867°$

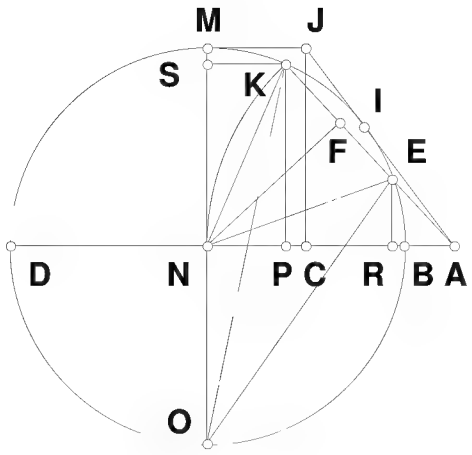
$m\angle UDCI = 23.289°$

$$\frac{m\angle UDG}{m\angle UDCI} = 3.000$$

Trisection and the square root figure.



08/23/00 Trisection In A Square Root Figure



Given the square root figure drawn for trisection, what is AR given AB and AD?

$N := 4 \qquad AB := 2 \qquad AD := AB \cdot N$

$AC := \sqrt{AB \cdot AD} \qquad BD := AD - AB$

$BN := \frac{BD}{2} \qquad KN := BN$

$AN := AB + BN \qquad AK := AN$

$AP := \frac{AK^2 + AN^2 - KN^2}{2 \cdot AN} \qquad AF := \frac{AP \cdot AN}{AK}$

$FK := AK - AF \qquad EF := FK$

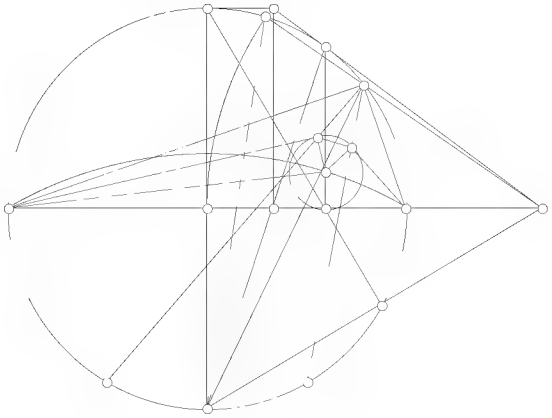
$AE := AK - 2 \cdot (EF) \qquad AR := \frac{AP \cdot AE}{AK} \qquad AB \cdot N \cdot \frac{\left(N^2 + 6 \cdot N + 1\right)}{(N+1)^3} - AR = 0 \qquad BR := AR - AB$

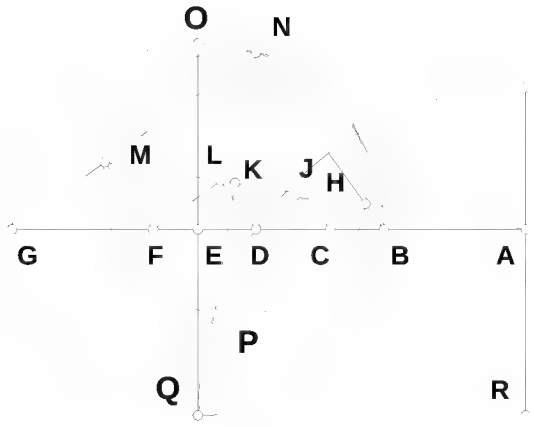
$AB \cdot (3 \cdot N + 1) \cdot \frac{(N-1)}{(N+1)^3} - BR = 0$

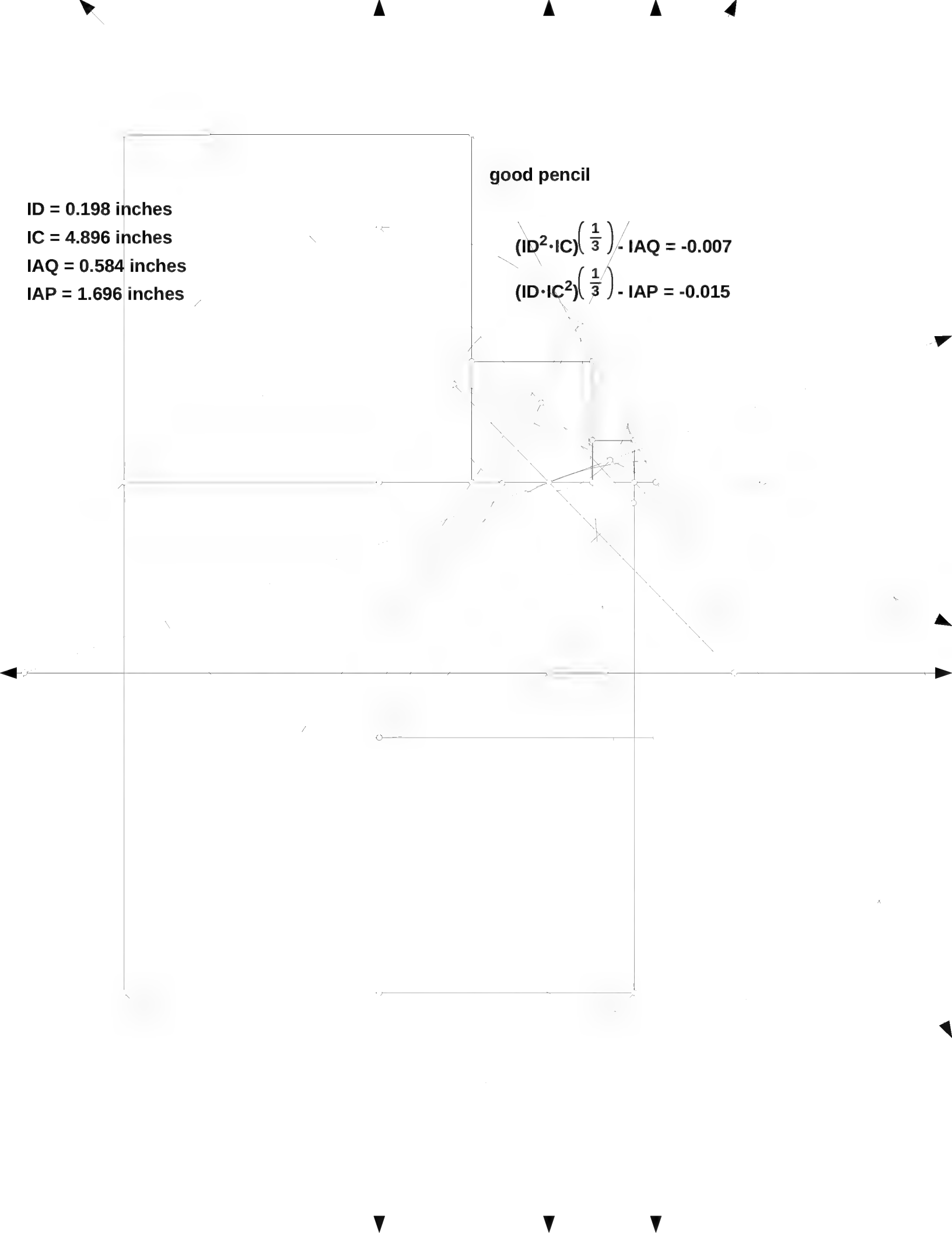
Does KS = FK?

$BP := AP - AB \qquad DP := BD - BP \qquad NP := BN - BP \qquad KS := NP \qquad KS - FK = 0$

$\frac{AB \cdot (N-1)^2}{4 \cdot (N+1)} - KS = 0$




O
N
M
L
K
J
H
G
F
E
D
C
B
A
P
Q
R



good pencil

ID = 0.198 inches

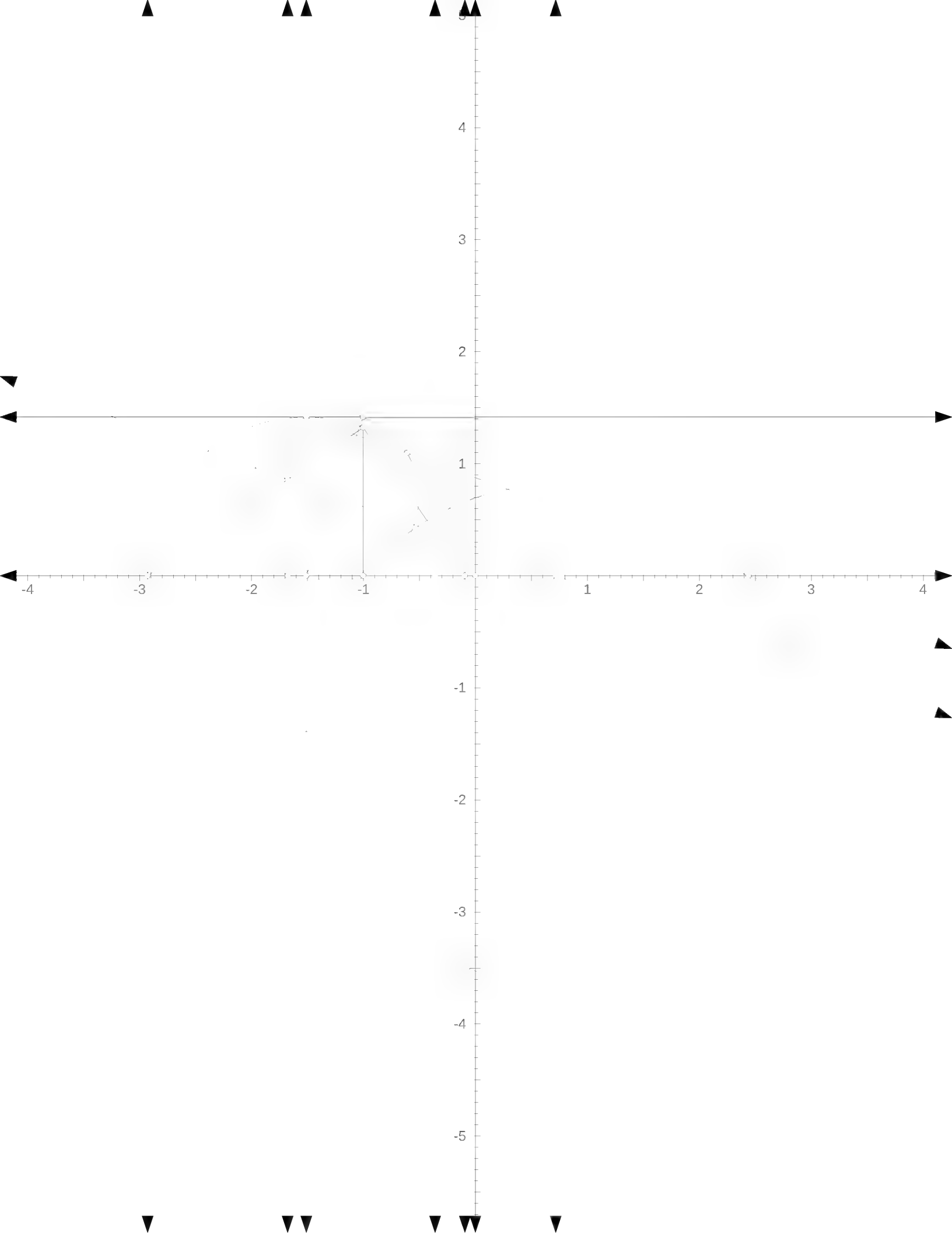
IC = 4.896 inches

IAQ = 0.584 inches

IAP = 1.696 inches

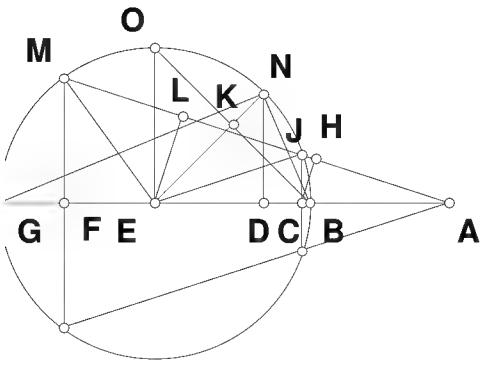
$(ID^2 \cdot IC)\left(\frac{1}{3}\right)$ - IAQ = -0.007

$(ID \cdot IC^2)\left(\frac{1}{3}\right)$ - IAP = -0.015


5
4
3
2
1
-1
-2
-3
-4
-5
-4
-3
-2
-1
1
2
3
4

09/03/00 Ratios In Trisection

How does BF vary with BC? How does DF vary with BC?



$N_1 := 4 \quad N_2 := 8$

$BG := 1 \quad BE := \frac{BG}{2} \quad EM := BE \quad BO := \sqrt{2 \cdot BE^2}$

$EN := BE \quad EK := \frac{BE \cdot BE}{BO} \quad KN := EN - EK \quad BK := \frac{BO}{2}$

$BN := \sqrt{BK^2 + KN^2} \quad BD := \frac{BN^2}{BG} \quad BC := BD \cdot \frac{N_1}{N_2}$

$CG := BG - BC \quad CJ := \sqrt{BC \cdot CG} \quad AJ := BE$

$AC := \sqrt{AJ^2 - CJ^2} \quad AB := AC - BC \quad AE := AB + BE$

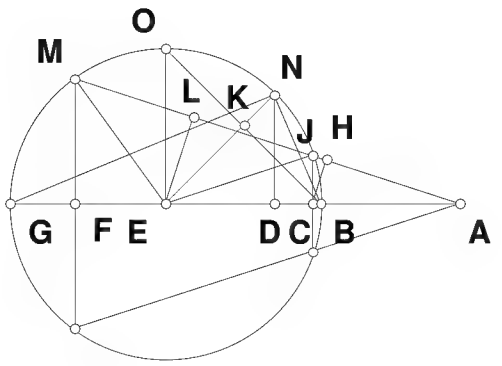
$JH := \frac{CJ^2}{AJ} \quad AH := AJ - JH \quad AL := \frac{AH \cdot AE}{AC} \quad JL := AL - AJ$

$LM := JL \quad AM := AL + LM \quad AF := \frac{AH \cdot AM}{AC} \quad BF := AF - AB$

$$\frac{-1}{4} \cdot \left(-2 + \sqrt{2}\right) \cdot \frac{N_1}{N_2} - BC = 0$$

$$BF - \frac{1}{8} \cdot \left(7 \cdot \sqrt{2} - 10\right) \cdot \left(N_1 - 4 \cdot N_2 - 2 \cdot N_2 \cdot \sqrt{2}\right) \cdot \frac{\left(2 \cdot N_1 - 2 \cdot N_2 - N_2 \cdot \sqrt{2}\right)^2}{N_2^3} = 0$$

$$\frac{1}{2} \cdot \frac{\left(2 \cdot N_1 - 2 \cdot N_2 - N_2 \cdot \sqrt{2}\right)^2 \cdot \left[\left(2 \cdot \sqrt{2} - 3\right) \cdot \left(N_1 - 4 \cdot N_2 - 2 \cdot N_2 \cdot \sqrt{2}\right)\right]}{\left(N_2^2 \cdot N_1\right)} - \frac{BF}{BC} = 0$$

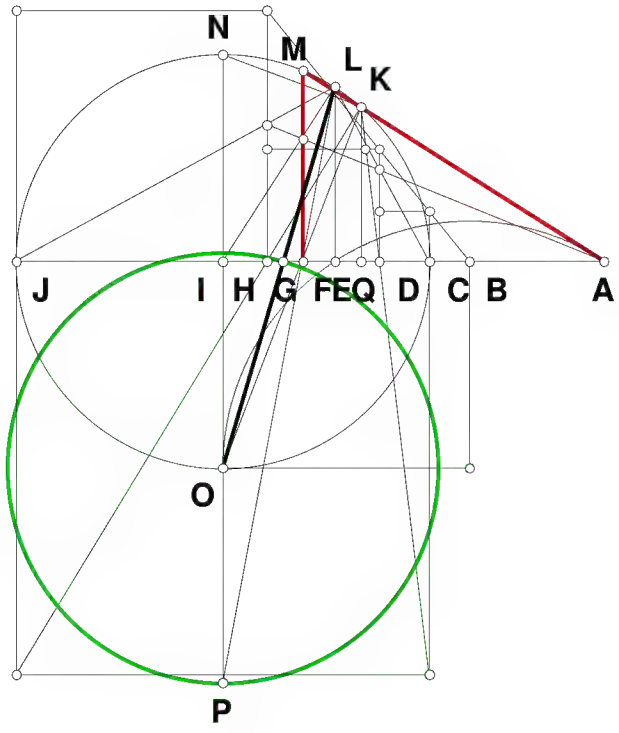


$$DF := BF - BD$$

$$\frac{(N_1 - N_2)\cdot\left[\left(7\cdot\sqrt{2} - 10\right)\cdot\left(12\cdot\sqrt{2}\cdot N_2^{\,2} + 17\cdot N_2^{\,2} + 2\cdot N_1^{\,2} - 10\cdot N_1\cdot N_2 - 6\cdot N_1\cdot\sqrt{2}\cdot N_2\right)\right]}{4\,N_2^{\,3}} - DF = 0$$

$$\frac{(N_1 - N_2)\cdot\left[\left(2\cdot\sqrt{2} - 3\right)\cdot\left(2\cdot N_1^{\,2} - 10\cdot N_1\cdot N_2 - 6\cdot N_1\cdot\sqrt{2}\cdot N_2 + 17\cdot N_2^{\,2} + 12\cdot\sqrt{2}\cdot N_2^{\,2}\right)\right]}{N_1\cdot N_2^{\,2}} - \frac{DF}{BC} = 0$$

Goshdarn Good Pencil 09/16/00



$N := 2$

$BC := 1 \quad BJ := BC \cdot N \quad BE := \sqrt{BC \cdot BJ}$

$CJ := BJ - BC \quad CI := \frac{CJ}{2} \quad IO := CI$

$NO := CJ \quad CR := CJ$

$CE := BE - BC \quad EI := CI - CE \quad EJ := CJ - CE$

$EL := \sqrt{CE \cdot EJ} \quad EG := \frac{EI \cdot EL}{EL + IO} \quad GI := EI - EG$

$GO := \sqrt{GI^2 + IO^2} \quad OP := GO$

$IP := IO + OP \quad EF := \frac{EI \cdot EL}{EL + IP} \quad FI := EI - EF$

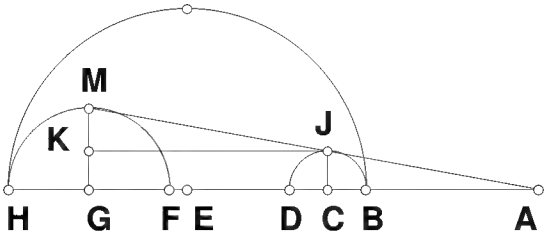
$FO := \sqrt{FI^2 + IO^2} \quad OK := \frac{IO \cdot NO}{FO}$

$FK := OK - FO \quad FQ := \frac{FI \cdot FK}{FO} \quad QI := FQ + FI \quad CQ := CI - QI \quad QJ := CJ - CQ \quad QK := \sqrt{CQ \cdot QJ}$

$CD := \frac{CQ \cdot CR}{CR + QK} \quad BD := CD + BC \quad \left(BC^2 \cdot BJ\right)^{\frac{1}{3}} - BD = 0.000004486957912$

Midpoints and Similarity Points 09/18/00

What is AE given the radius of the two circles and the difference between their centers? (External Unit).



$N_1 := 2 \quad N_2 := 3 \quad N_3 := 8$

$BC := N_1 \quad GH := N_2 \quad CG := N_3$

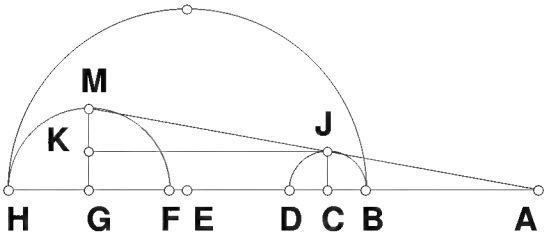
$CJ := BC \quad GM := GH \quad GK := CJ$

$BH := BC + CG + GH \quad BE := \frac{BH}{2}$

$KM := GM - GK \quad JK := CG \quad AG := \frac{JK \cdot GM}{KM} \quad AH := AG + GH \quad AB := AH - BH \quad AE := AB + BE$

$$AE - \frac{N_3 \cdot N_2 - 2 \cdot N_1 \cdot N_2 + N_1^2 + N_3 \cdot N_1 + N_2^2}{2 \cdot (N_2 - N_1)} = 0$$

What is AE if given the difference between their extremes and the radius given as a ratio of that segment? (Internal Unit).



$N_1 := 3 \quad N_2 := 7 \quad N_3 := 4 \quad N_4 := 9$

$BH := 1 \quad BE := \frac{BH}{2} \quad BC := BH \cdot \frac{N_1}{N_2}$

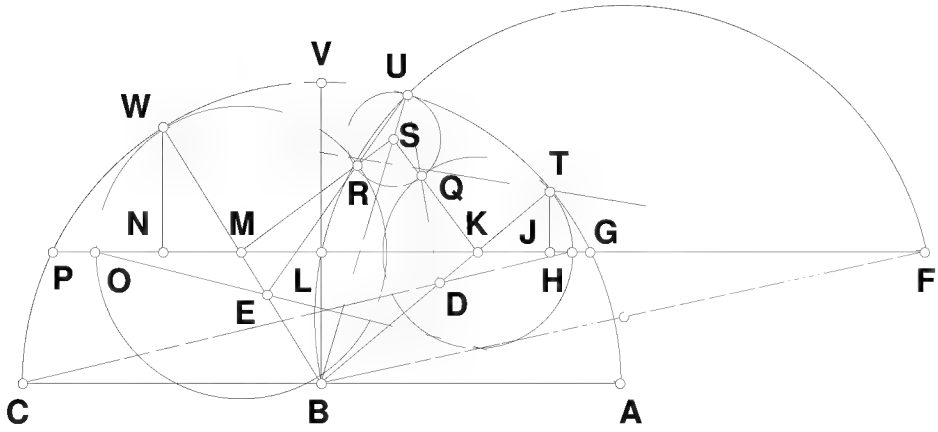
$GH := BH \cdot \frac{N_3}{N_4} \quad CG := BH - (BC + GH)$

$CJ := BC \quad GM := GH \quad GK := CJ$

$KM := GM - GK \quad JK := CG \quad AG := \frac{JK \cdot GM}{KM} \quad AH := AG + GH \quad AB := AH - BH \quad AE := AB + BE$

$$AE - \frac{(N_3 \cdot N_2 - 4 \cdot N_3 \cdot N_1 + N_1 \cdot N_4)}{2 \cdot (N_3 \cdot N_2 - N_1 \cdot N_4)} = 0$$

100600



$N_1 := 2.286$

$N_2 := 4.805$

$N_3 := 1.5364$

$AC := 3.104$

$AB := \frac{AC}{2}$ $BW := AB$

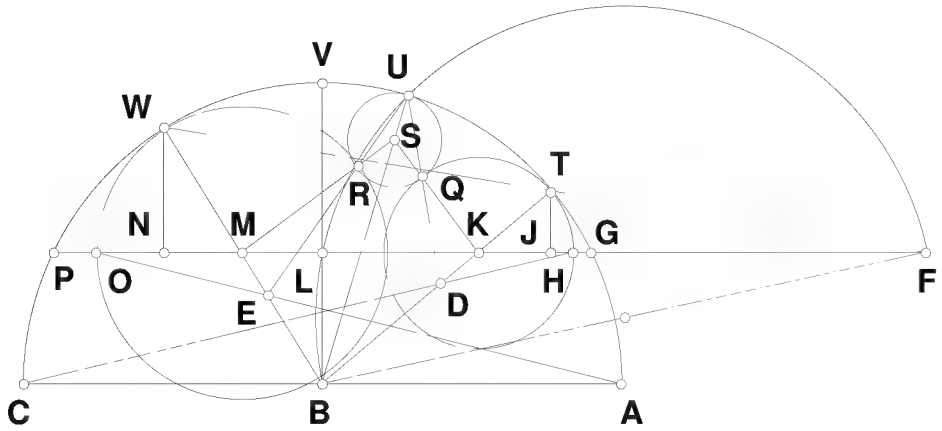
$BT := AB$ $BV := AB$

$BL := \frac{BV}{N_1}$ $LV := BV - BL$ $LP := (LV \cdot (BL + BV))^{\frac{1}{2}}$ $GL := LP$ $GP := GL + LP$ $GK := \frac{GP}{N_2}$

$GM := \frac{GP}{N_3}$ $KL := GL - GK$ $LM := GM - GL$ $BK := \left(BL^2 + KL^2\right)^{\frac{1}{2}}$ $BM := \left(BL^2 + LM^2\right)^{\frac{1}{2}}$

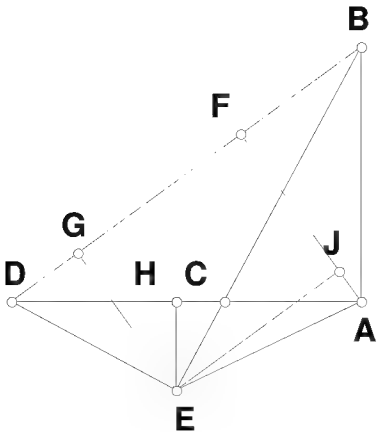
$KT := BT - BK$ $MW := BW - BM$ $KM := GM - GK$ $D := KM$ $R_L := MW$ $R_S := KT$

$FM := \frac{D \cdot R_L}{R_L - R_S}$ $FL := FM - LM$ $BF := \left(BL^2 + FL^2\right)^{\frac{1}{2}}$



Given AB, DE, AD find BE, AC, CD, CE, BC.

BAD and BED are right.



$N_1 := 3 \qquad N_2 := 5 \qquad N_3 := 1$

$AB := N_1 \quad AD := N_2 \quad DE := N_3$

$BD := \sqrt{AB^2 + AD^2} \quad BF := \frac{AB^2}{BD} \quad DG := \frac{DE^2}{BD} \qquad BE := \sqrt{BD^2 - DE^2}$

$AF := \sqrt{AB^2 - BF^2} \quad EG := \sqrt{DE^2 - DG^2} \qquad FG := BD - (BF + DG)$

$EJ := FG \quad FJ := EG \quad AJ := AF - FJ \qquad AE := \sqrt{EJ^2 + AJ^2}$

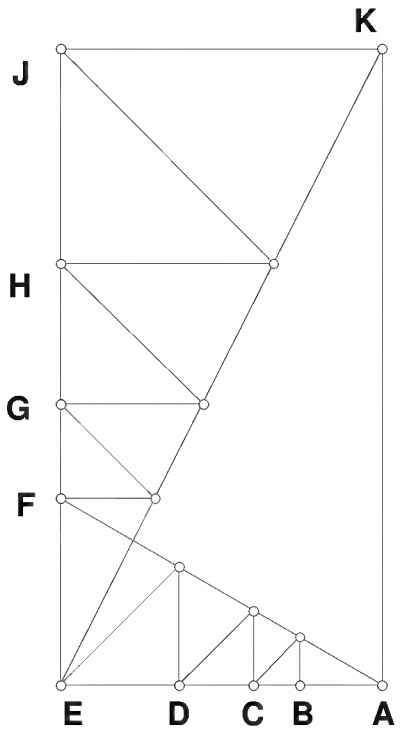
$S_1 := AD \quad S_2 := DE \quad S_3 := AE \qquad AH := \frac{S_3^2 + S_1^2 - S_2^2}{2 \cdot S_1}$

$EH := \sqrt{AE^2 - AH^2} \quad CH := \frac{EH \cdot AH}{AB + EH} \quad AC := AH - CH \quad CE := \frac{AC \cdot DE}{AB} \quad CD := AD - AC \quad BC := BE - CE$

$$N_1 \cdot \frac{\left(-N_3^2 \cdot N_2 + N_2^3 + N_1^2 \cdot N_2 - N_1 \cdot \sqrt{N_1^2 + N_2^2 - N_3^2} \cdot N_3\right)}{N_1^3 + N_1 \cdot N_2^2 + N_3 \cdot \sqrt{-N_3^2 \cdot N_2^2 + N_2^4 + N_1^2 \cdot N_2^2 - 2 \cdot N_1 \cdot N_2 \cdot \sqrt{N_1^2 + N_2^2 - N_3^2} \cdot N_3 + N_3^2 \cdot N_1^2}} - AC = 0$$

$$N_3 \cdot \frac{\left(-N_3^2 \cdot N_2 + N_2^3 + N_2 \cdot N_1^2 - N_1 \cdot N_3 \cdot \sqrt{N_1^2 + N_2^2 - N_3^2}\right)}{N_1^3 + N_1 \cdot N_2^2 + N_3 \cdot \sqrt{-N_3^2 \cdot N_2^2 + N_2^4 + N_1^2 \cdot N_2^2 - 2 \cdot N_1 \cdot N_2 \cdot \sqrt{N_1^2 + N_2^2 - N_3^2} \cdot N_3 + N_3^2 \cdot N_1^2}} - CE = 0$$

Modify 02/28/98 for Mean proportionals between E and J.



$AE := 1 \qquad N := 3 \qquad EJ := AE \cdot N \qquad JK := AE$

$HJ := \frac{JK \cdot EJ}{JK + EJ} \qquad EH := EJ - HJ \qquad GH := \frac{EH \cdot HJ}{EH + HJ}$

$EG := EH - GH \qquad FG := \frac{EG \cdot GH}{EG + GH} \qquad EF := EG - FG$

$DE := \frac{EF \cdot AE}{EF + AE} \qquad AD := AE - DE \qquad CD := \frac{AD \cdot DE}{AD + DE}$

$AC := AD - CD \qquad BC := \frac{AC \cdot CD}{AC + CD} \qquad AB := AC - BC$

$M := 0 .. 3 \qquad P := 0 .. 3 \qquad AEAB_{M,P} := \left[\frac{N^{M+1}}{(N+1)^{M}} + 1 \right]^{P}$

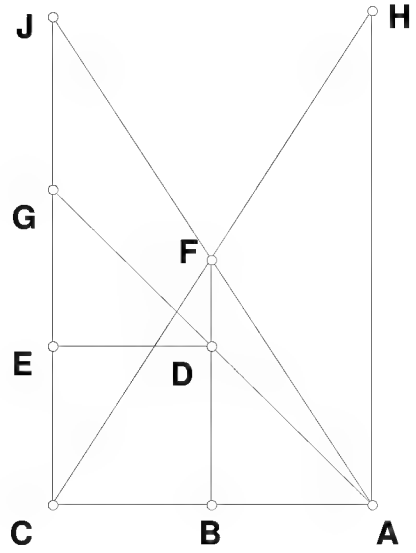
$$AEAB = \begin{bmatrix} 1 & 4 & 16 & 64 \\ 1 & 3.25 & 10.563 & 34.328 \\ 1 & 2.688 & 7.223 & 19.411 \\ 1 & 2.266 & 5.133 & 11.63 \end{bmatrix}$$

$AEAB_{3,3} - \frac{AE}{AB} = 0 \qquad AEAB_{3,2} - \frac{AE}{AC} = 0 \qquad AEAB_{3,1} - \frac{AE}{AD} = 0 \qquad AEAB_{3,0} - \frac{AE}{AE} = 0$

$AEAB_{3,3} - \frac{AE}{AB} = 0$

Multiplication and Division-Line By A Line 11/29/00

Given some unit, and two differences, multiply or divide the one difference by the other.
For Division:



$AC := 1 \qquad N_1 := 3 \qquad N_2 := 12 \qquad AH := N_1$

$CJ := N_2 \qquad AB := \frac{AH}{(CJ + AH)} \cdot AC$

$BC := AC - AB \quad BD := BC \quad CG := \frac{BD \cdot AC}{AB}$

$CG - \frac{N_2}{N_1} = 0 \qquad CG = 4$

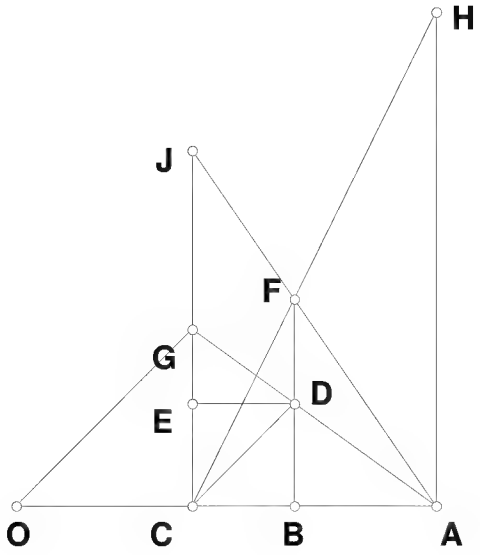
For Multiplication:

$AC := 1 \qquad N_1 := 5 \qquad N_2 := 7 \qquad AH := N_1$

$CG := N_2 \qquad CO := CG \qquad BD := \frac{CG \cdot AC}{AC + CO}$

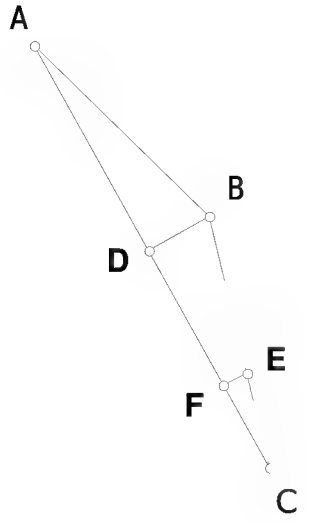
$BC := BD \qquad AB := AC - BC \qquad BF := \frac{AH \cdot BC}{AC}$

$CJ := BF \cdot \frac{AC}{AB} \qquad CJ - N_1 \cdot N_2 = 0 \qquad CJ = 35$



120500

From an observer C, the distance to star A and B are known, a reference CEF has been constructed, find the difference between the two stars.



$$N_1 := 5 \qquad N_2 := 25 \qquad N_3 := 1 \qquad N_4 := .5$$

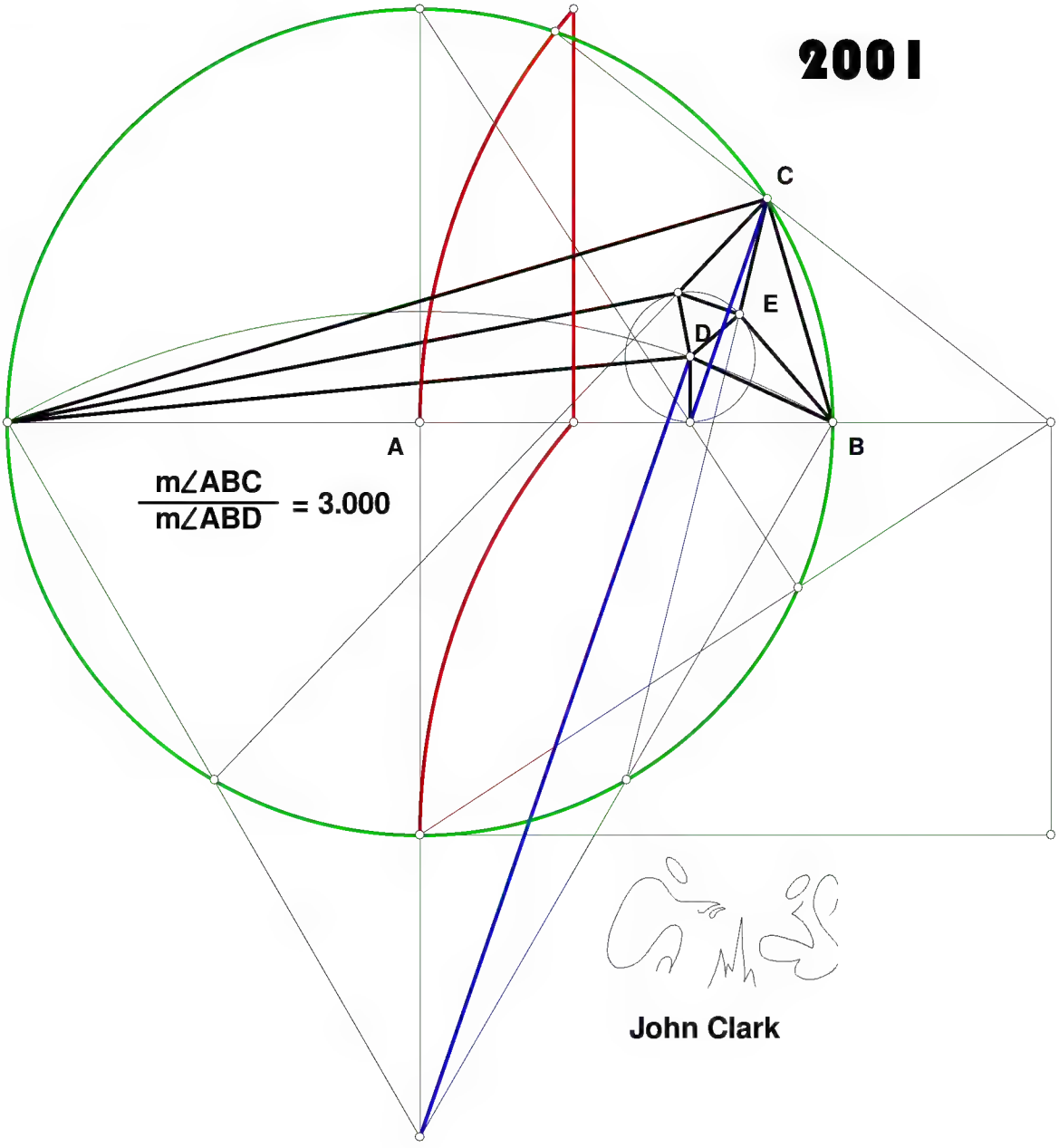
$$BC := N_1 \qquad AC := N_2 \qquad CE := N_3 \qquad EF := N_4$$

$$BD := \frac{EF \cdot BC}{CE} \qquad CF := \sqrt{CE^2 - EF^2} \qquad CD := \frac{CF \cdot BC}{CE}$$

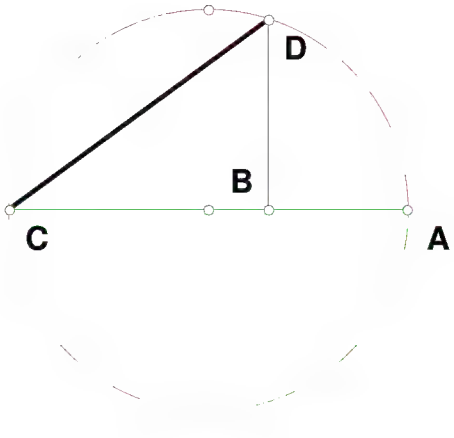
$$AD := AC - CD \qquad AB := \sqrt{BD^2 + AD^2}$$

$$AB - \sqrt{\frac{1}{N_3} \cdot \left(N_2^{\,2} \cdot N_3 - 2 \cdot N_2 \cdot \sqrt{N_3^{\,2} - N_4^{\,2}} \cdot N_1 + N_1^{\,2} \cdot N_3 \right)} = 0$$

Three Pieces Of Paper



John Clark



Alternate method for common segment common endpoint square root. $\sqrt{AC \cdot BC} = CD$

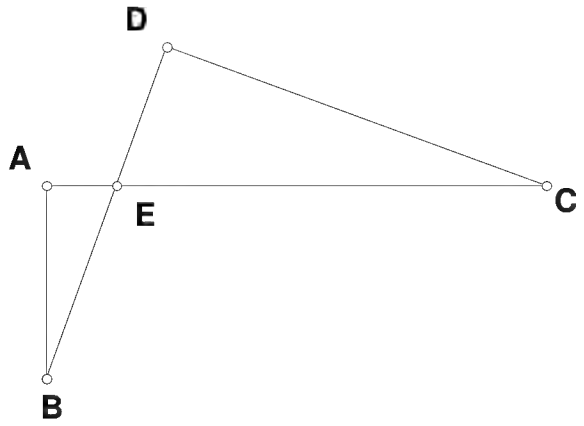
$N_1 := 5 \quad N_2 := 3 \quad AC := N_1 \quad BC := N_2$

$AB := AC - BC \quad BD := \sqrt{AB \cdot BC} \quad CD := \sqrt{BD^2 + BC^2}$

$\sqrt{N_2 \cdot N_1} - CD = 0$

Three Given Five Taken 042101

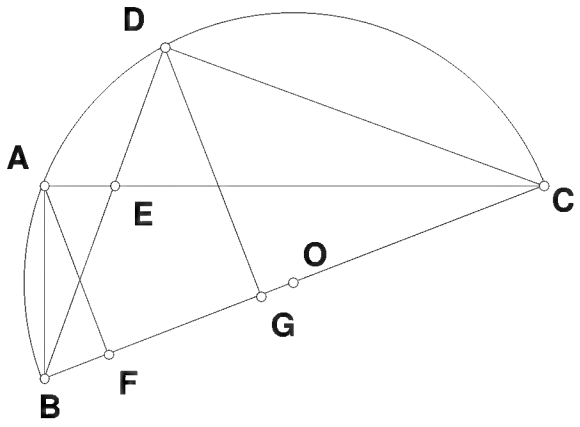
Given AB, CD, AC and that CDB, and BAC are right angles, what are BD, AE, CE, BE, DE?



$N_1 := 2 \qquad N_2 := 3 \qquad N_3 := 4$

$AB := N_1 \quad CD := N_2 \quad AC := N_3$

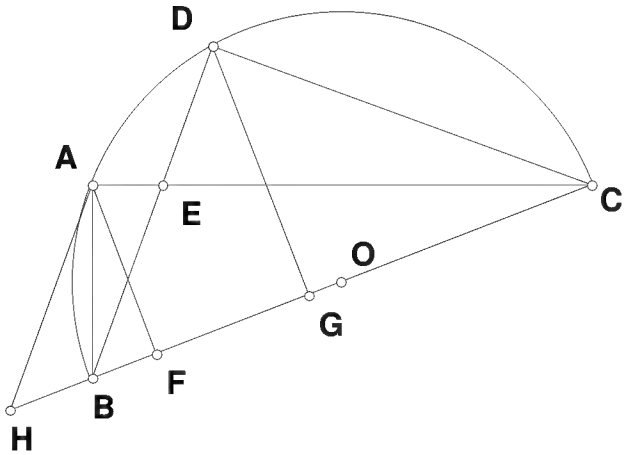
$BC := \sqrt{AB^2 + AC^2} \qquad CG := \frac{CD^2}{BC} \qquad BF := \frac{AB^2}{BC}$



$BG := BC - CG \qquad CF := BC - BF$

$AF := \sqrt{AB^2 - BF^2} \qquad DG := \sqrt{CD^2 - CG^2}$

$FH := \frac{BG \cdot AF}{DG} \qquad CH := CF + FH$



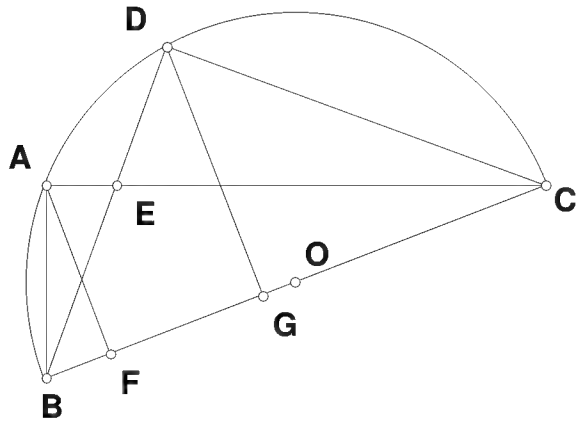
$BD := \sqrt{BG^2 + DG^2}$

$AH := \frac{BD \cdot FH}{BG} \qquad BE := \frac{AH \cdot BC}{CH}$

$DE := BD - BE \qquad CE := \frac{AC \cdot BC}{CH}$

$AE := AC - CE$

Idea about process progression: Given two differences one renders a set number of processes upon them, then one progresses to three?



Some Algebraic Names:

$$\sqrt{N_1^2 + N_3^2} - BC = 0 \qquad \frac{N_2^2}{\sqrt{N_1^2 + N_3^2}} - CG = 0$$

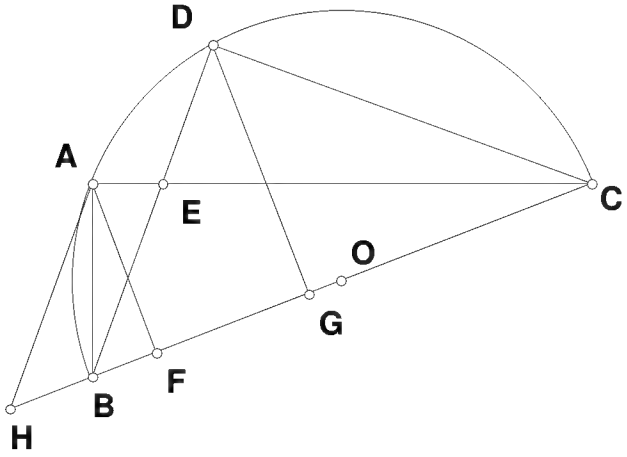
$$\frac{N_1^2}{\sqrt{N_1^2 + N_3^2}} - BF = 0$$

$$\frac{\left(N_1^2 + N_3^2 - N_2^2\right)}{\sqrt{N_1^2 + N_3^2}} - BG = 0$$

$$\frac{N_3^2}{\sqrt{N_1^2 + N_3^2}} - CF = 0$$

$$\frac{N_1 \cdot N_3}{\sqrt{N_1^2 + N_3^2}} - AF = 0$$

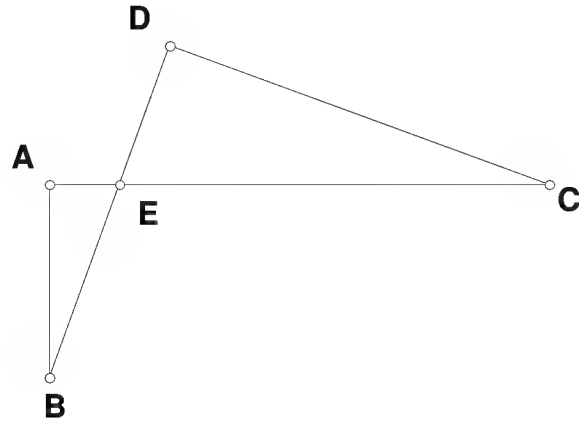
$$N_2 \cdot \sqrt{\frac{\left(N_1^2 + N_3^2 - N_2^2\right)}{\left(N_1^2 + N_3^2\right)}} - DG = 0$$



$$\frac{N_3 \cdot N_1 \cdot \left(N_1^2 + N_3^2 - N_2^2\right)}{N_2 \cdot \sqrt{\left(N_1^2 + N_3^2 - N_2^2\right) \cdot \left(N_1^2 + N_3^2\right)}} - FH = 0$$

$$\left[\frac{N_3^2}{\sqrt{N_1^2 + N_3^2}} + \frac{N_3 \cdot N_1 \cdot \left(N_1^2 + N_3^2 - N_2^2\right)}{N_2 \cdot \sqrt{\left(N_1^2 + N_3^2 - N_2^2\right) \cdot \left(N_1^2 + N_3^2\right)}}\right] - CH = 0 \qquad N_3 \cdot \frac{N_1}{N_2} - AH = 0$$

The Five Sought:



$$\sqrt{N_1^2 + N_3^2 - N_2^2} - BD = 0$$

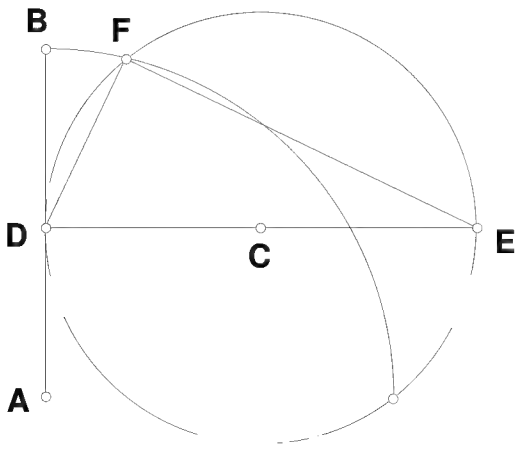
$$N_2 \cdot \frac{\left(\sqrt{N_1^2 + N_3^2 - N_2^2} \cdot N_3 - N_1 \cdot N_2\right)}{\left(N_3 \cdot N_2 + \sqrt{N_1^2 + N_3^2 - N_2^2} \cdot N_1\right)} - DE = 0$$

$$N_1 \cdot \frac{\left(N_1^2 + N_3^2\right)}{\left(N_3 \cdot N_2 + \sqrt{N_1^2 + N_3^2 - N_2^2} \cdot N_1\right)} - BE = 0$$

$$\frac{N_2 \cdot \left(N_1^2 + N_3^2\right)}{N_3 \cdot N_2 + \sqrt{N_1^2 + N_3^2 - N_2^2} \cdot N_1} - CE = 0$$

$$N_3 - \frac{N_2 \cdot \left(N_1^2 + N_3^2\right)}{\left(N_3 \cdot N_2 + \sqrt{N_1^2 + N_3^2 - N_2^2} \cdot N_1\right)} - AE = 0$$

Given AB as unit, AD and DC, what is EF and DF?



$N_1 := 2.052 \quad N_2 := .62 \quad AB := 1.802$

$AD := \frac{AB}{N_1} \quad CD := AB \cdot N_2 \quad DE := 2\ CD$

$AF := AB \quad CF := CD$

$AC := \sqrt{AD^2 + CD^2} \quad S_1 := AF \quad S_2 := AC \quad S_3 := CF$

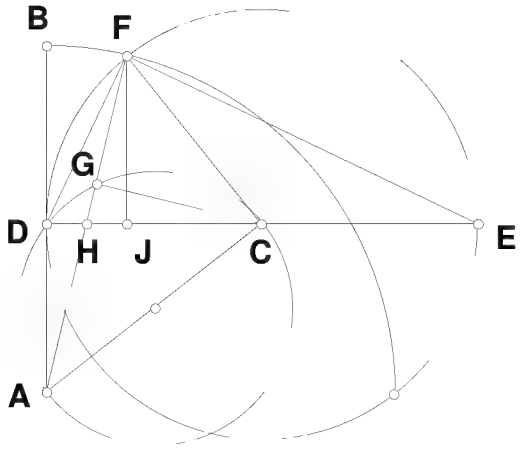
$AG := \frac{S_2^2 + S_1^2 - S_3^2}{2 \cdot S_1} \quad CG := \sqrt{AC^2 - AG^2}$

$L_1 := AD \quad L_2 := CG \quad L_3 := CD$

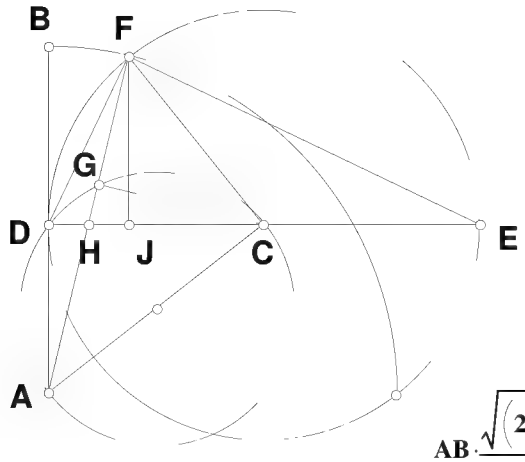
$DH := L_3 - \frac{L_2 \cdot \left(L_1^2 + L_3^2\right)}{L_3 \cdot L_2 + \sqrt{L_1^2 + L_3^2 - L_2^2} \cdot L_1}$

$AH := L_1 \cdot \frac{\left(L_1^2 + L_3^2\right)}{\left(L_3 \cdot L_2 + \sqrt{L_1^2 + L_3^2 - L_2^2} \cdot L_1\right)} \quad FH := AF - AH \quad HJ := \frac{DH \cdot FH}{AH}$

$DJ := DH + HJ \quad EJ := DE - DJ \quad FJ := \frac{AD \cdot FH}{AH} \quad EF := \sqrt{FJ^2 + EJ^2} \quad DF := \sqrt{DJ^2 + FJ^2}$



Some Algebraic Names:



$$\frac{AB}{N_1} - AD = 0 \qquad AB \cdot N_2 - CD = 0$$

$$(2\,AB) \cdot N_2 - DE = 0 \qquad AB \cdot \frac{\sqrt{\left(1 + N_2^{\,2} \cdot N_1^{\,2}\right)}}{N_1} - AC = 0$$

$$\frac{1}{2} \cdot AB \cdot \frac{1 + N_1^{\,2}}{N_1^{\,2}} - AG = 0$$

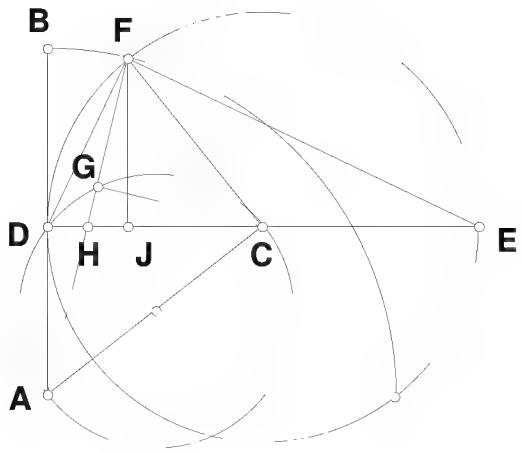
$$AB \cdot \frac{\sqrt{\left(2 \cdot N_1^{\,2} \cdot N_2 + N_1^{\,2} - 1\right) \cdot \left(2 \cdot N_1^{\,2} \cdot N_2 - N_1^{\,2} + 1\right)}}{2 \cdot N_1^{\,2}} - CG = 0$$

$$AB \cdot \frac{N_2 \cdot N_1^{\,3} + N_2 \cdot N_1 - \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}}}{N_1^{\,3} + N_1^{\,2} \cdot N_2 \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} + N_1} - DH = 0$$

$$2 \cdot AB \cdot \frac{\left(1 + N_2^{\,2} \cdot N_1^{\,2}\right)}{\left(N_1 \cdot N_2 \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} + 1 + N_1^{\,2}\right)} - AH = 0$$

$$AB - 2 \cdot AB \cdot \frac{\left(1 + N_2^{\,2} \cdot N_1^{\,2}\right)}{\left(N_1 \cdot N_2 \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} + 1 + N_1^{\,2}\right)} - FH = 0$$

$$\frac{-1}{2} \cdot AB \cdot \frac{\left[\begin{array}{l} -N_1^{\,4} \cdot N_2^{\,2} \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} \ldots \\ + 2 \cdot N_1^{\,3} \cdot N_2 - 2 \cdot N_1^{\,5} \cdot N_2 \ldots \\ + 6 \cdot N_1^{\,5} \cdot N_2^{\,3} - 3 \cdot N_2^{\,2} \cdot N_1^{\,2} \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} \ldots \\ + 2 \cdot N_2^{\,3} \cdot N_1^{\,3} - \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} \ldots \\ + N_1^{\,2} \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} \end{array}\right]}{\left[N_1 \cdot \left[\left(N_1 \cdot N_2 \cdot \sqrt{2 \cdot N_1^{\,2} + 4 \cdot N_1^{\,4} \cdot N_2^{\,2} - 1 - N_1^{\,4}} + 1 + N_1^{\,2}\right) \cdot \left(1 + N_2^{\,2} \cdot N_1^{\,2}\right)\right]\right]} - HJ = 0$$



$$\frac{1}{2}\cdot AB\cdot\frac{\left(N_1^{\,3}\cdot N_2+N_2\cdot N_1-\sqrt{2\cdot N_1^{\,2}+4\cdot N_1^{\,4}\cdot N_2^{\,2}-1-N_1^{\,4}}\right)}{\left[\left(1+N_2^{\,2}\cdot N_1^{\,2}\right)\cdot N_1\right]}-DJ=0$$

$$\frac{1}{2}\cdot AB\cdot\frac{\left(3\cdot N_2\cdot N_1+4\cdot N_2^{\,3}\cdot N_1^{\,3}-N_1^{\,3}\cdot N_2+\sqrt{2\cdot N_1^{\,2}+4\cdot N_1^{\,4}\cdot N_2^{\,2}-1-N_1^{\,4}}\right)}{\left[\left(1+N_2^{\,2}\cdot N_1^{\,2}\right)\cdot N_1\right]}-EJ=0$$

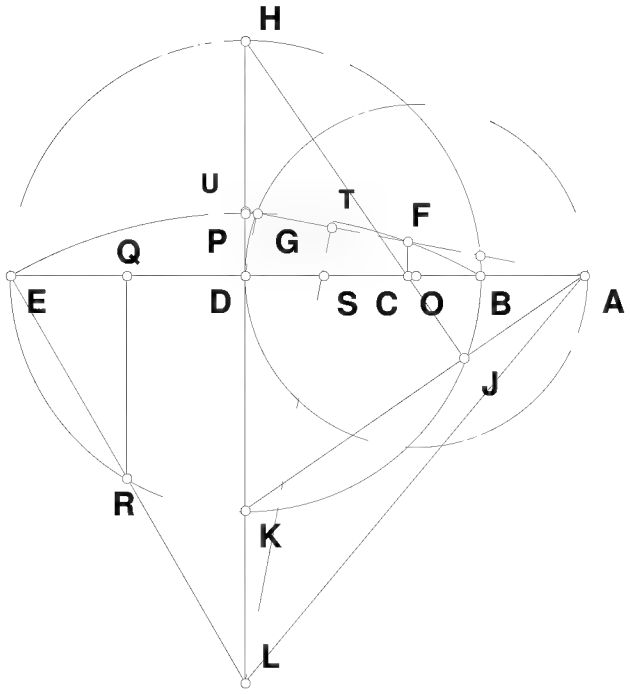
$$\frac{-1}{2}\cdot AB\,\frac{\left(-N_1\cdot N_2\cdot\sqrt{2\cdot N_1^{\,2}+4\cdot N_1^{\,4}\cdot N_2^{\,2}-1-N_1^{\,4}}+1-N_1^{\,2}+2\cdot N_2^{\,2}\cdot N_1^{\,2}\right)}{\left[N_1\cdot\left(1+N_2^{\,2}\cdot N_1^{\,2}\right)\right]}-FJ=0$$

$$AB\cdot\sqrt{N_2\cdot\frac{\left(3\cdot N_1\cdot N_2+4\cdot N_2^{\,3}\cdot N_1^{\,3}-N_1^{\,3}\cdot N_2+\sqrt{2\cdot N_1^{\,2}+4\cdot N_1^{\,4}\cdot N_2^{\,2}-1-N_1^{\,4}}\right)}{\left[\left(1+N_2^{\,2}\cdot N_1^{\,2}\right)\cdot N_1\right]}}-EF=0$$

$$AB\cdot\sqrt{N_1^{\,3}\cdot N_2+N_1\cdot N_2-\sqrt{2\cdot N_1^{\,2}+4\cdot N_1^{\,4}\cdot N_2^{\,2}-1-N_1^{\,4}}\cdot\frac{N_2}{\left[N_1\cdot\left(1+N_2^{\,2}\cdot N_1^{\,2}\right)\right]}}-DF=0$$

Counterpoint 042301

CF is the radius of a circle expressed in trisection. Is AF the counterpart of AC?



$N := 5.48643 \qquad AB := .54331$

$AE := AB \cdot N \qquad BE := AE - AB$

$BD := \frac{BE}{2} \qquad AD := AB + BD$

$AO := \frac{AD}{2} \qquad DE := BD \quad DQ := \frac{DE}{2}$

$EQ := DQ \quad BQ := BD + DQ$

$QR := \sqrt{BQ \cdot EQ} \qquad ER := \sqrt{QR^2 + EQ^2}$

$EL := 2 \cdot ER \quad LP := EL \quad DL := \frac{QR \cdot EL}{ER}$

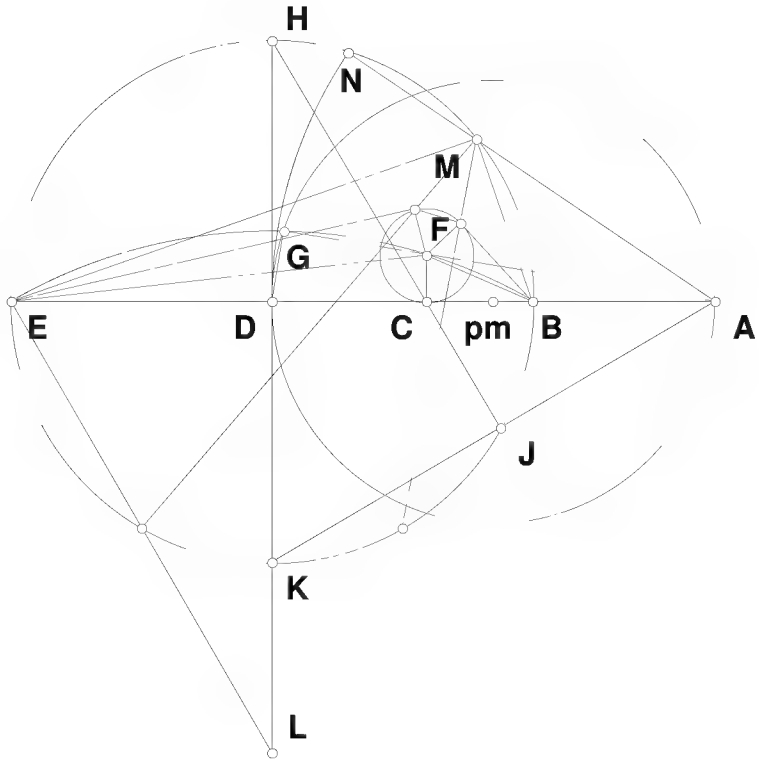
Try to figure out how I do this;

$$AG := \frac{AB \cdot (N-1)}{4} \cdot \sqrt{2} \cdot \sqrt{(1+N) \cdot \sqrt{3}} \cdot \sqrt{\frac{\left[\frac{5}{18} \cdot \sqrt{3} \cdot \frac{(1+N)}{(N-1)} + \frac{1}{18} \cdot \frac{(1+N)^3}{(N-1)^3} \cdot \sqrt{3} + \frac{1}{3} \cdot \frac{\sqrt{(N+3) \cdot (3 \cdot N+1)}}{(N-1)}\right]}{\left[\frac{1}{12} \cdot \frac{\left(13 \cdot N^2 - 22 \cdot N + 13\right)}{(N-1)}\right]}}$$

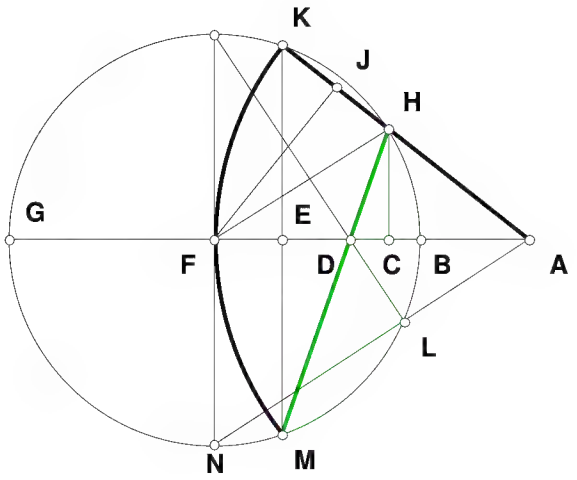
$DG := \sqrt{AD^2 - AG^2} \quad AU := \frac{AD \cdot AD}{AG} \quad DU := \frac{DG \cdot AD}{AG} \quad LU := DL + DU \quad TU := \frac{DG \cdot LU}{AD} \quad GU := AU - AG$

$TG := TU - GU \quad FT := TG \quad AF := AG - (FT + TG) \quad AC := \frac{AD \cdot AF}{AU}$

From 012496 for AC $2 \cdot AB \cdot \frac{N}{(1+N)}$ $AC - 2 \cdot AB \cdot \frac{N}{(1+N)} = 0$



042401



Does HM intersect at D? What is the Algebraic name of HM in relation to AB and AG?

$N := 5$ $AB := 1$ $AG := AB \cdot N$

$BG := AG - AB$ $BF := \frac{BG}{2}$ $AF := AB + BF$

$AK := AF$ $FK := BF$ $AE := \frac{2\,AK^2 - FK^2}{2\,AF}$

$AJ := AE$ $JK := AK - AJ$ $HJ := JK$

$AH := AK - (JK + HJ)$ $AC := \frac{AE \cdot AH}{AK}$ $CE := AE - AC$ $BE := AE - AB$ $EG := BG - BE$

$EK := \sqrt{BE \cdot EG}$ $BC := AC - AB$ $CG := BG - BC$ $CH := \sqrt{BC \cdot CG}$ $DE := \frac{CE \cdot EK}{EK + CH}$

$DF := 2 \cdot DE$ $HM := \sqrt{CE^2 + (EK + CH)^2}$

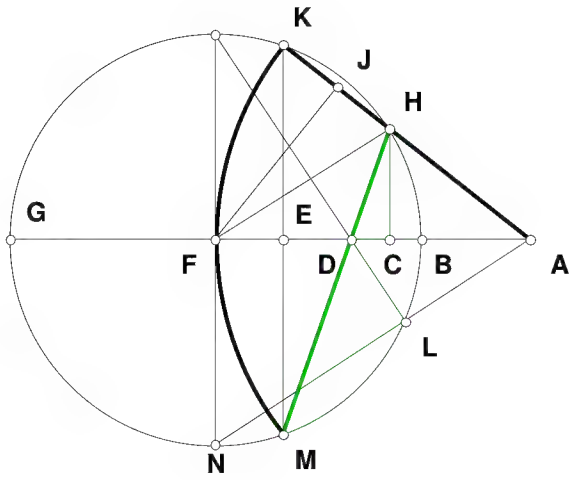
Some Algebraic Names:

$AB \cdot N - AB - BG = 0$ $\frac{1}{2} \cdot AB \cdot N - \frac{1}{2} \cdot AB - BF = 0$ $\frac{1}{2} \cdot AB + \frac{1}{2} \cdot AB \cdot N - AF = 0$

$\frac{1}{4} \cdot AB \cdot \frac{(N^2 + 6 \cdot N + 1)}{(1 + N)} - AE = 0$ $\frac{1}{4} \cdot AB \cdot \frac{(1 - 2 \cdot N + N^2)}{(1 + N)} - JK = 0$ $2 \cdot AB \cdot \frac{N}{(1 + N)} - AH = 0$

$AB \cdot \frac{(1 + 6 \cdot N + N^2)}{(1 + N)^3} \cdot N - AC = 0$ $\frac{1}{4} \cdot AB \cdot (N^2 + 6 \cdot N + 1) \cdot \frac{(N - 1)^2}{(1 + N)^3} - CE = 0$

$\frac{1}{4} \cdot AB \cdot (N + 3) \cdot \frac{(N - 1)}{(1 + N)} - BE = 0$ $\frac{1}{4} \cdot AB \cdot (3 \cdot N + 1) \cdot \frac{(N - 1)}{(1 + N)} - EG = 0$



$$\frac{1}{4}\cdot AB\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot\frac{(N-1)}{(1+N)}-EK=0$$

$$AB\cdot(3\cdot N+1)\cdot\frac{(N-1)}{(1+N)^3}-BC=0$$

$$AB\cdot N^2\cdot(N+3)\cdot\frac{(N-1)}{(1+N)^3}-CG=0$$

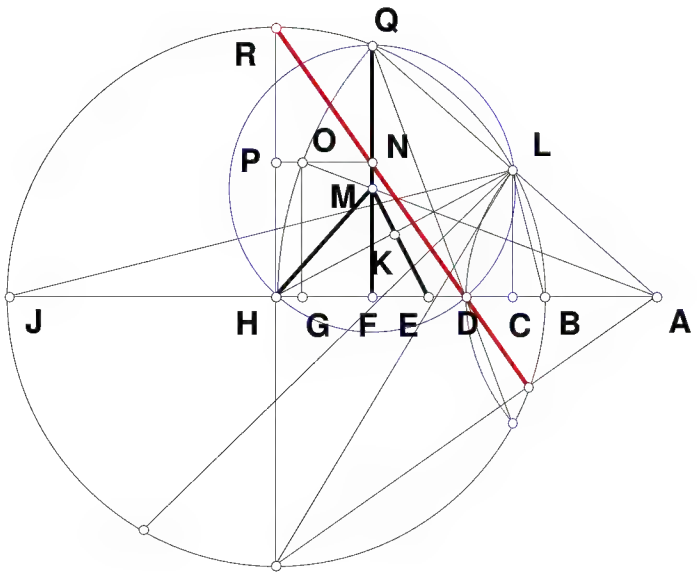
$$AB\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\cdot\frac{(N-1)}{(1+N)^3}-CH=0$$

$$\frac{1}{4}\cdot AB\cdot\frac{(N-1)^2}{(1+N)}-DE=0$$

$$\frac{1}{2}\cdot AB\cdot\frac{(N-1)^2}{(N+1)}-DF=0$$

$$\frac{1}{2}\cdot AB\cdot(N-1)\cdot\frac{\left(1+6\cdot N+N^2\right)}{(1+N)^2}-HM=0$$

What is the Algebraic name of the circle HM? Does point N divide DR in half?



$N := 5.768 \quad AB := .583 \quad AJ := AB \cdot N$

$BJ := AJ - AB \quad BH := \frac{BJ}{2} \quad HR := BH$

$HP := \frac{HR}{2} \quad GO := HP \quad AH := AB + BH$

$AO := AH \quad AG := \sqrt{AO^2 - GO^2}$

$HQ := BH \quad AQ := AH \quad FH := \frac{HQ^2}{2 \cdot AH}$

$AF := AH - FH \quad FM := \frac{GO \cdot AF}{AG}$

$HJ := BH \quad FJ := FH + HJ \quad BF := BJ - FJ$

$FQ := \sqrt{BF \cdot FJ} \quad MQ := FQ - FM \quad HM := \sqrt{FH^2 + FM^2} \quad HM - MQ = 0$

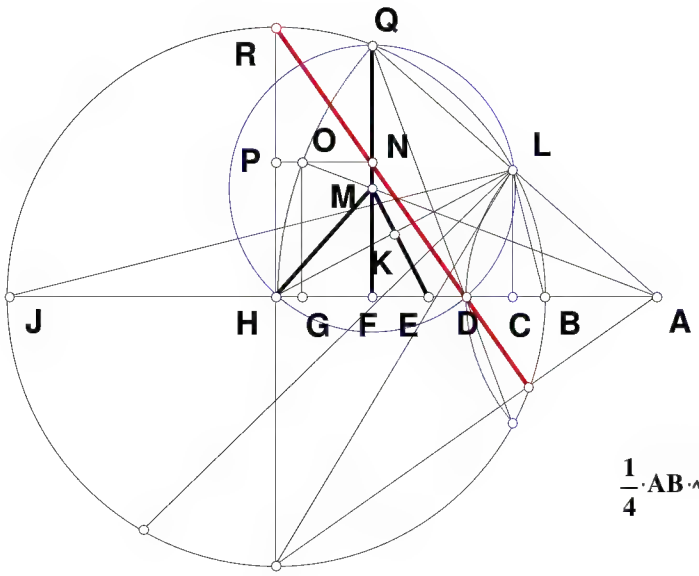
$DH := \frac{HR^2}{AH} \quad \frac{DH}{2} - FH = 0$

Some Algebraic Names:

$AB \cdot N - AB - BJ = 0 \quad \frac{1}{2} \cdot AB \cdot (N - 1) - BH = 0 \quad \frac{1}{4} \cdot AB \cdot (N - 1) - HP = 0$

$\frac{1}{2} \cdot AB \cdot (1 + N) - AH = 0 \quad \frac{1}{4} \cdot AB \cdot \sqrt{(N + 3) \cdot (3 \cdot N + 1)} - AG = 0 \quad \frac{1}{4} \cdot AB \cdot \frac{(N - 1)^2}{(1 + N)} - FH = 0$

$\frac{1}{4} \cdot AB \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1 + N)} - AF = 0 \quad \frac{1}{4} \cdot (N - 1) \cdot AB \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{\left[(1 + N) \cdot \sqrt{(N + 3) \cdot (3 \cdot N + 1)}\right]} - FM = 0$



$$\frac{1}{4}\cdot AB\cdot(N-1)\cdot\frac{(3\cdot N+1)}{(1+N)}-FJ=0$$

$$\frac{1}{4}\cdot AB\cdot(N+3)\cdot\frac{(N-1)}{(1+N)}-BF=0$$

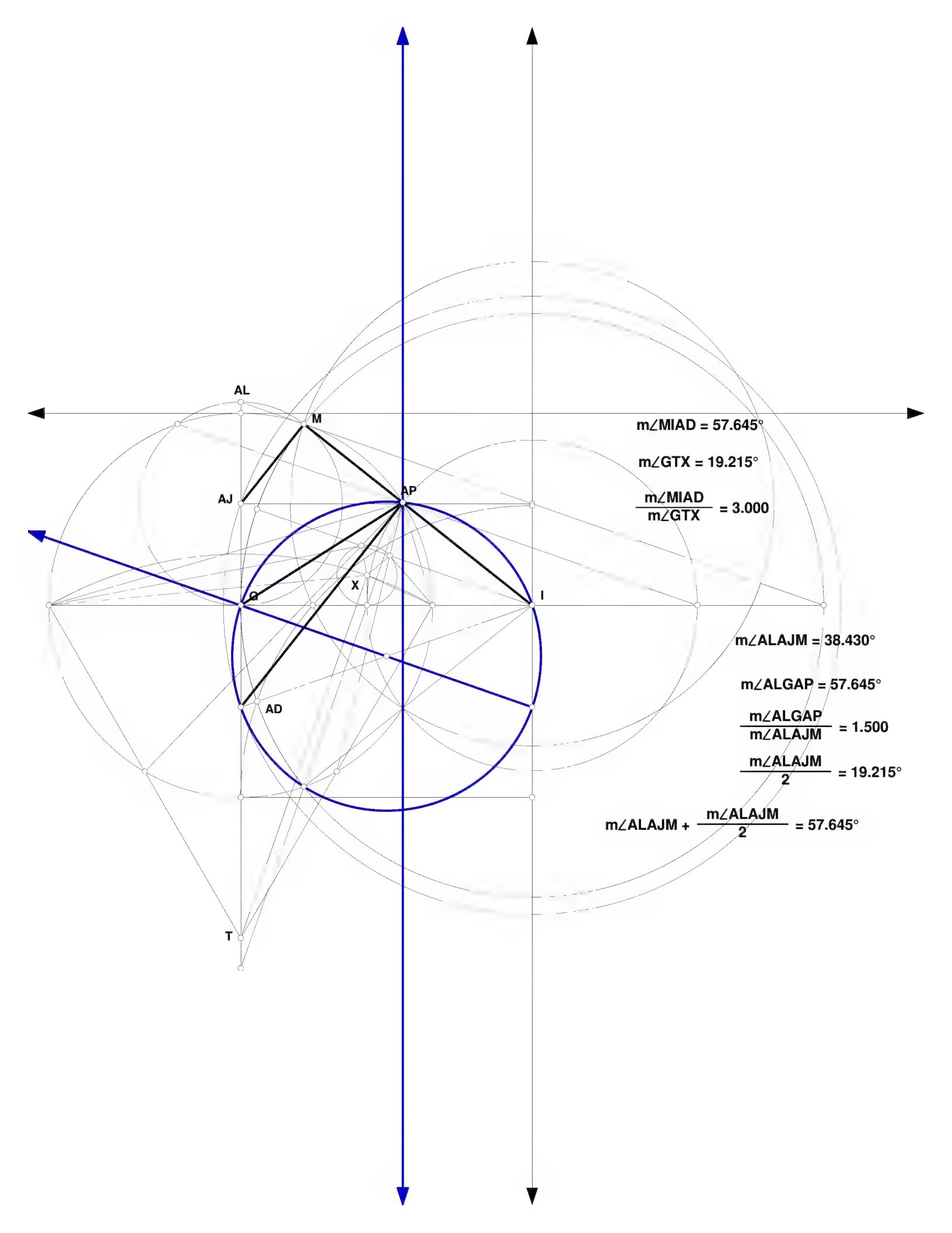
$$\frac{1}{4}\cdot AB\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot\frac{(N-1)}{(1+N)}-FQ=0$$

$$\frac{1}{2}\cdot(1+N)\cdot AB\cdot\frac{(N-1)}{\sqrt{(N+3)\cdot(3\cdot N+1)}}-MQ=0$$

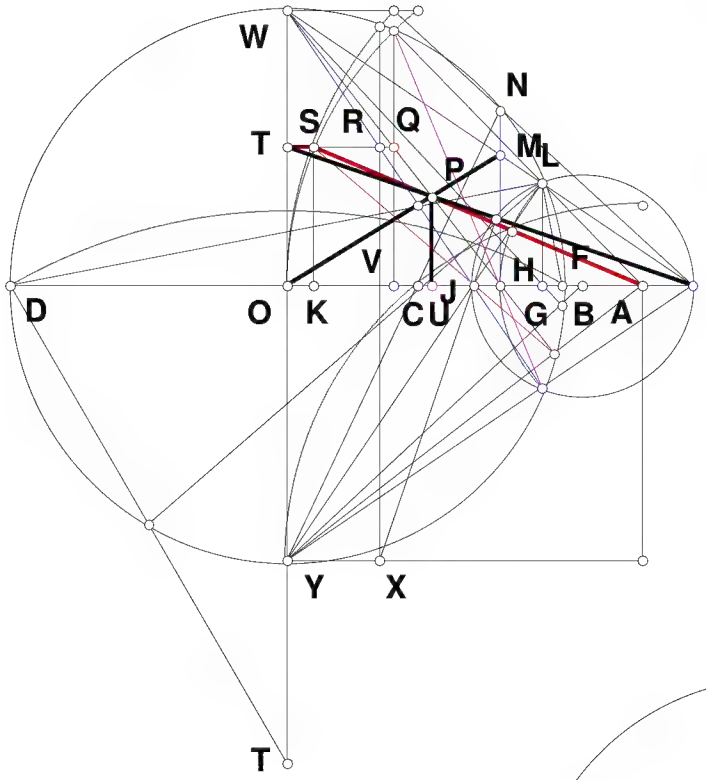
$$\frac{1}{2}\cdot AB\cdot(N-1)\cdot\frac{(1+N)}{\sqrt{(N+3)\cdot(3\cdot N+1)}}-HM=0$$

$$HM-MQ=0$$

$$\frac{1}{2}\cdot AB\cdot\frac{(N-1)^2}{(1+N)}-DH=0 \qquad \frac{DH}{2}-FH=0$$


AL
M
AJ
AP
X
G
I
AD
T
m∠MIAD = 57.645°
m∠GTX = 19.215°
m∠MIAD / m∠GTX = 3.000
m∠ALAJM = 38.430°
m∠ALGAP = 57.645°
m∠ALGAP / m∠ALAJM = 1.500
m∠ALAJM / 2 = 19.215°
m∠ALAJM + m∠ALAJM / 2 = 57.645°

Four Lines To A Point 042901

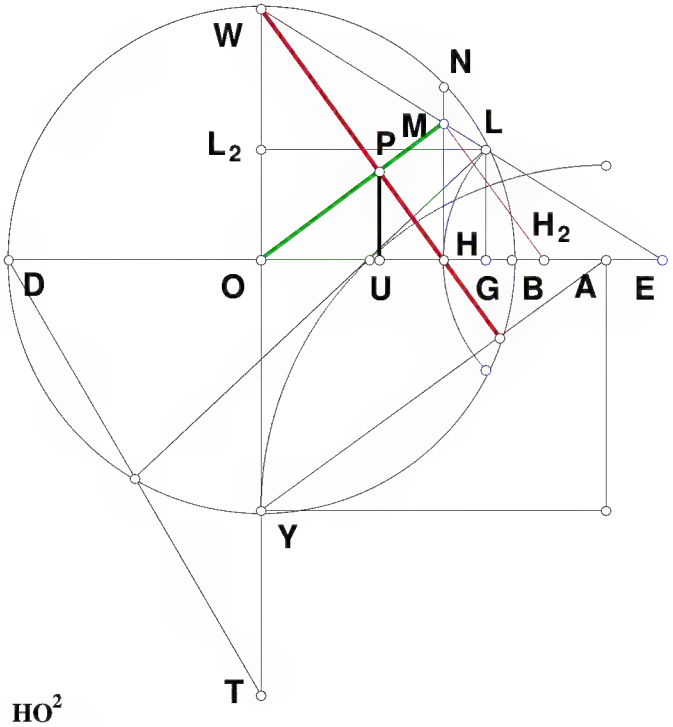


Does the difference OU and PU each have but one Algebraic name?

$N := 5 \qquad AB := 1 \qquad AD := AB \cdot N$

$BD := AD - AB \qquad BO := \frac{BD}{2} \qquad OW := BO$

$OY := BO \qquad DO := BO \qquad AO := AB + BO$



$HO := \frac{OY^2}{AO} \qquad AH := AO - HO \qquad AL := AH$

$OL := BO \qquad GO := \frac{OL^2 + AO^2 - AL^2}{2\,AO}$

$BG := BO - GO \qquad DG := GO + DO$

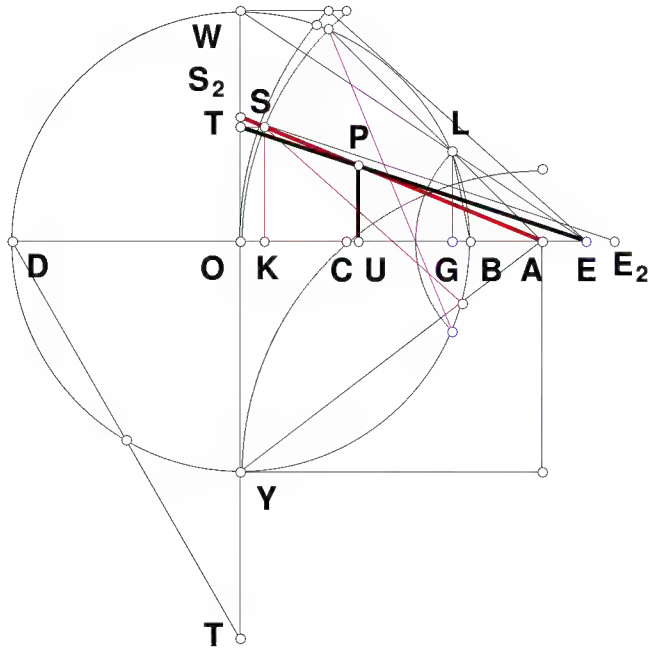
$GL := \sqrt{BG \cdot DG} \qquad EO := \frac{GO \cdot OW}{OW - GL}$

$BE := EO - BO \qquad BH := BO - HO$

$EG := BE + BG \qquad EH := BE + BH$

$HM := \frac{GL \cdot EH}{EG} \qquad HH_2 := \frac{HO \cdot HM}{OW} \qquad OU := \frac{HO^2}{HH_2 + HO}$

$UP := \frac{HM \cdot OU}{HO}$



$$OT := \frac{OW}{2} \quad KS := OT \quad AS := AO$$

$$AK := \sqrt{AS^2 - KS^2} \quad OS_2 := \frac{KS \cdot AO}{AK}$$

$$OE_2 := \frac{EO \cdot OS_2}{OT} \quad AS_2 := \sqrt{AO^2 + OS_2^2}$$

$$AE_2 := OE_2 - AO \quad AE := EO - AO$$

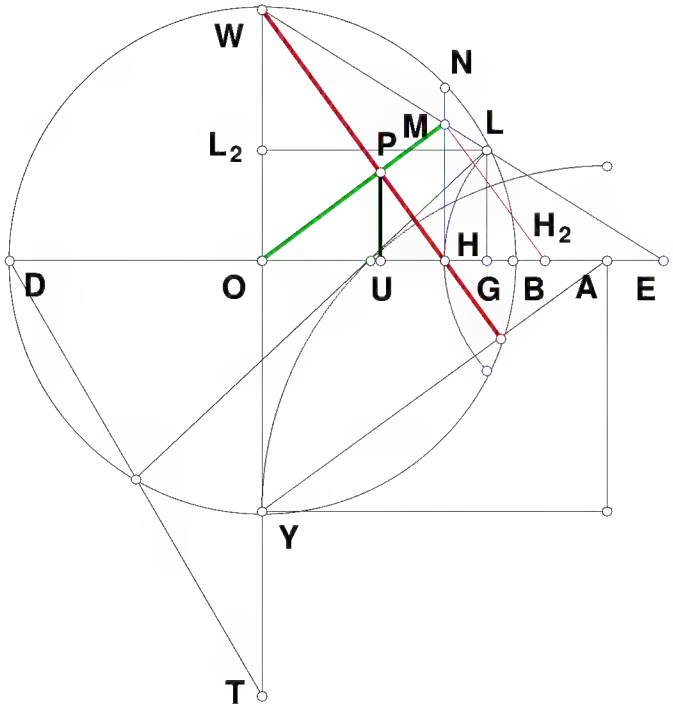
$$AP := \frac{AS_2 \cdot AE}{AE_2} \quad AU := \frac{AO \cdot AE}{AE_2}$$

$$UO := AO - AU \quad PU := \frac{OS_2 \cdot AU}{AO}$$

$$UO - OU = 0$$

$$PU - UP = 0$$

Some Algebraic Names:



$$AB\cdot(N-1)-BD=0$$

$$\frac{AB\cdot(N-1)}{2}-BO=0$$

$$\frac{1}{2}\cdot AB\cdot(1+N)-AO=0$$

$$\frac{1}{2}\cdot AB\cdot\frac{(N-1)^2}{(1+N)}-HO=0$$

$$2\cdot AB\cdot\frac{N}{(1+N)}-AH=0$$

$$\frac{1}{2}\cdot AB\cdot\left(N^2+4\cdot N+1\right)\cdot\frac{(N-1)^2}{(1+N)^3}-GO=0$$

$$AB\cdot(3\cdot N+1)\cdot\frac{(N-1)}{(1+N)^3}-BG=0$$

$$AB\cdot(N-1)\cdot N^2\cdot\frac{(N+3)}{(1+N)^3}-DG=0$$

$$\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\cdot(N-1)\cdot\frac{AB}{(1+N)^3}-GL=0$$

$$\frac{1}{2}\cdot AB\cdot\left(N^2+4\cdot N+1\right)\cdot\frac{(N-1)^2}{\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}-EO=0$$

$$AB\cdot(N-1)\cdot\frac{\left[\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N-3\cdot N-1\right]}{\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}-BE=0$$

$$AB\cdot\frac{(N-1)}{(1+N)}-BH=0$$

$$AB\cdot\frac{(N-1)^2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\cdot\left(N^2+4\cdot N+1\right)}{\left[\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]\cdot(1+N)^3\right]}-EG=0$$

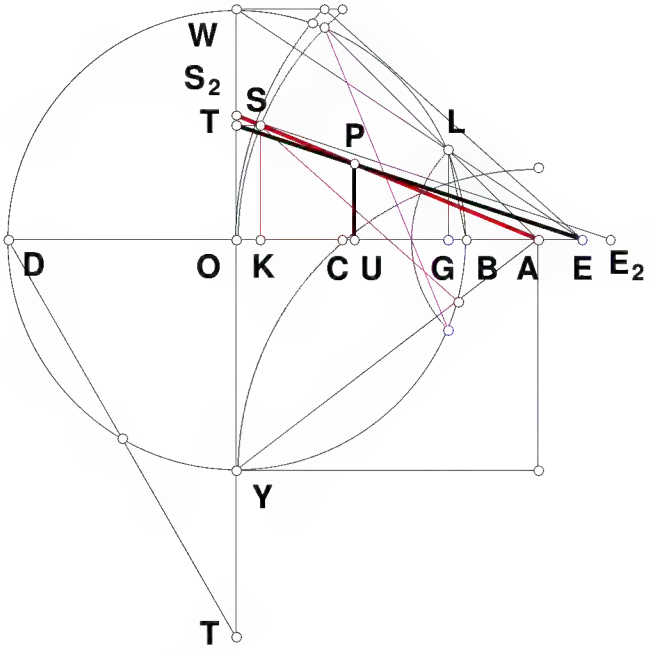
$$AB\cdot(N-1)^2\cdot N\cdot\frac{\left[N+\sqrt{(N+3)\cdot(3\cdot N+1)}+1\right]}{\left[\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]\cdot(1+N)\right]}-EH=0$$

$$N\cdot(N-1)\cdot\frac{AB}{(1+N)}\cdot\frac{\left[N+\sqrt{(N+3)\cdot(3\cdot N+1)}+1\right]}{\left(N^2+4\cdot N+1\right)}-HM=0$$

$$AB\cdot\frac{(N-1)^2}{(1+N)^2}\cdot N\cdot\frac{\left[N+\sqrt{(N+3)\cdot(3\cdot N+1)}+1\right]}{\left(N^2+4\cdot N+1\right)}-HH_2=0$$

$$\frac{1}{2}\cdot AB\cdot(N-1)^2\cdot\frac{\left(N^2+4\cdot N+1\right)}{\left[7\cdot N\cdot(N+1)+2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+1+N^3\right]}-OU=0$$

$$N\cdot(N-1)\cdot AB\cdot\frac{\left[N+\sqrt{(N+3)\cdot(3\cdot N+1)}+1\right]}{\left[7\cdot N+7\cdot N^2+2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+1+N^3\right]}-UP=0$$



$$\frac{1}{4}\cdot AB\cdot(N-1)-OT=0$$

$$\frac{AB}{4}\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}-AK=0$$

$$\frac{1}{2}\cdot AB\cdot\frac{(N-1)\cdot(1+N)}{\sqrt{(N+3)\cdot(3\cdot N+1)}}-OS_2=0$$

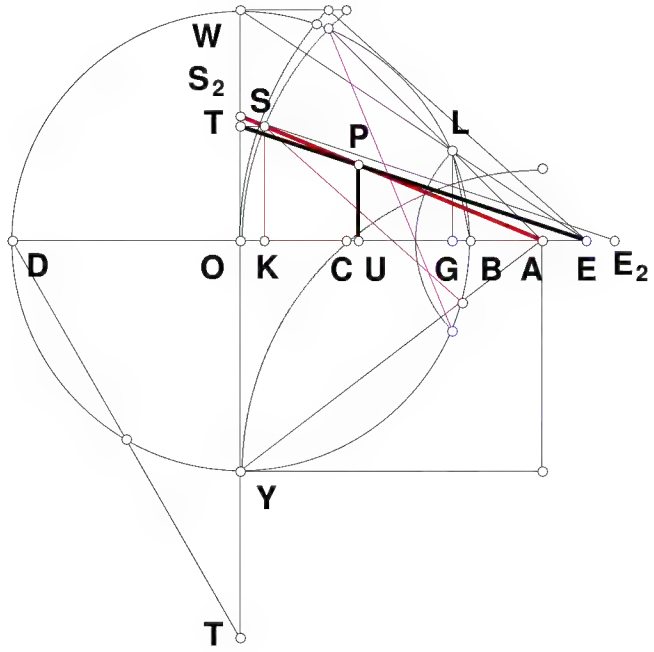
$$\frac{\left[AB\cdot\left(N^2+4\cdot N+1\right)\cdot(N-1)^2\right]}{\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}\cdot\frac{(1+N)}{\sqrt{(N+3)\cdot(3\cdot N+1)}}-OE_2=0$$

$$(1+N)^2\cdot\frac{AB}{\sqrt{3+10\cdot N+3\cdot N^2}}-AS_2=0$$

$$\frac{\left[AB\cdot\left(N^2+4\cdot N+1\right)\cdot(N-1)^2\right]}{\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}\cdot\frac{(1+N)}{\sqrt{(N+3)\cdot(3\cdot N+1)}}-\frac{1}{2}\cdot AB\cdot(1+N)-AE_2=0$$

$$-AB\cdot N\cdot\frac{\left[N^2+6\cdot N+1-\sqrt{(N+3)\cdot(3\cdot N+1)}-\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}{\left[3\cdot N+1+3\cdot N^2+N^3-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]}-AE=0$$

$$\frac{-2\cdot AB\cdot N\cdot(1+N)\cdot\left[N^2+6\cdot N-\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+1-\sqrt{(N+3)\cdot(3\cdot N+1)}\right]}{\left(2\cdot N^4+10\cdot N^3+8\cdot N^2+10\cdot N+2\right)-3\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\ \ldots}-AP=0$$
$$+\ -\sqrt{(N+3)\cdot(3\cdot N+1)}-3\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N^2-\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N^3$$



$$\frac{-AB\cdot N\cdot\left[N^2+6\cdot N+1-\sqrt{(N+3)\cdot(3\cdot N+1)}-\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\right]\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}}{\left(2\cdot N^4+10\cdot N^3+8\cdot N^2+10\cdot N+2\right)-3\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N\ \ldots}-AU=0$$
$$+\ -\sqrt{(N+3)\cdot(3\cdot N+1)}-3\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N^2-\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N^3$$

$$\frac{1}{2}\cdot AB\cdot(N-1)^2\cdot\frac{\left(N^2+4\cdot N+1\right)}{\left[7\cdot N\cdot(N+1)+2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+1+N^3\right]}-UO=0$$

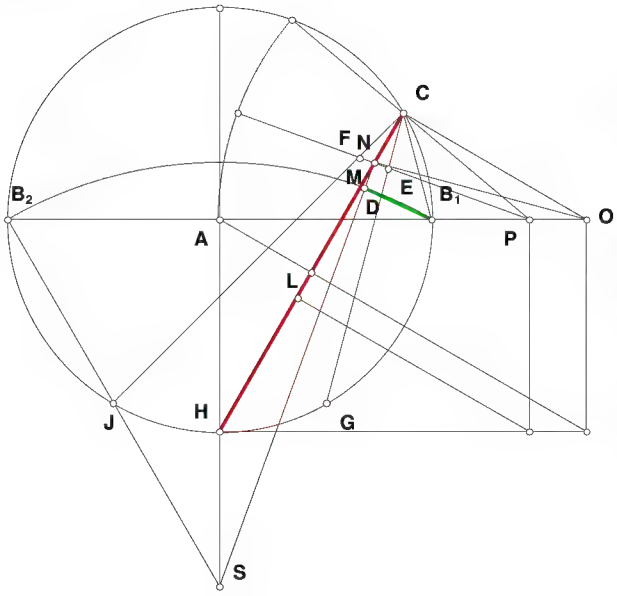
$$N\cdot(N-1)\cdot AB\cdot\frac{\left[N+\sqrt{(N+3)\cdot(3\cdot N+1)}+1\right]}{\left[7\cdot N+7\cdot N^2+2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+1+N^3\right]}-PU=0$$

Compass Construction 043001

$m\angle AB_1C = 75.000°$ $m\angle AB_2C = 15.000°$

$m\angle AB_1D = 25.000°$ $m\angle AB_2D = 5.000°$

$\frac{m\angle AB_1C}{m\angle AB_1D} = 3.000$ $\frac{m\angle AB_2C}{m\angle AB_2D} = 3.000$



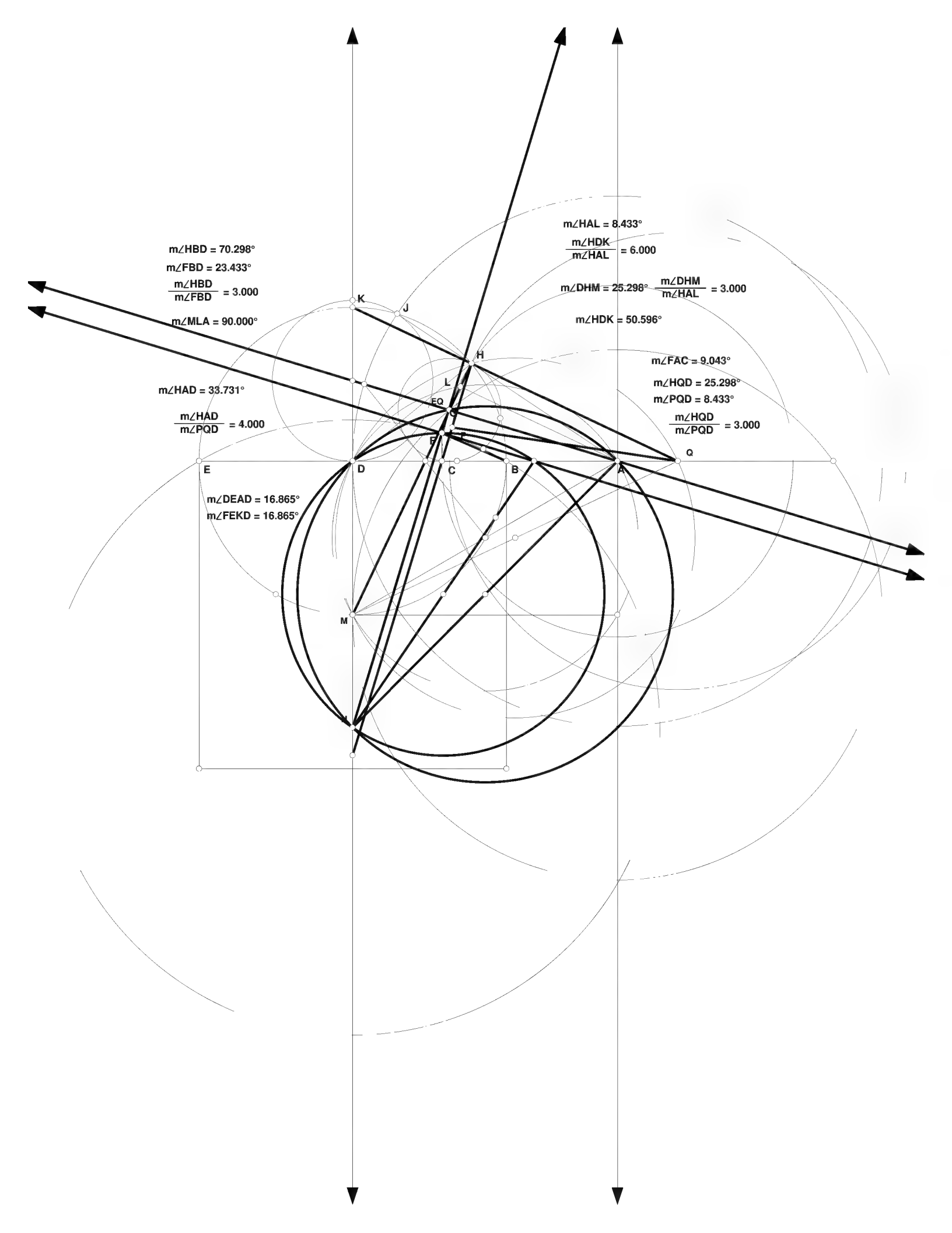
$m\angle ABC - 3 \cdot m\angle ABD = 0.000°$

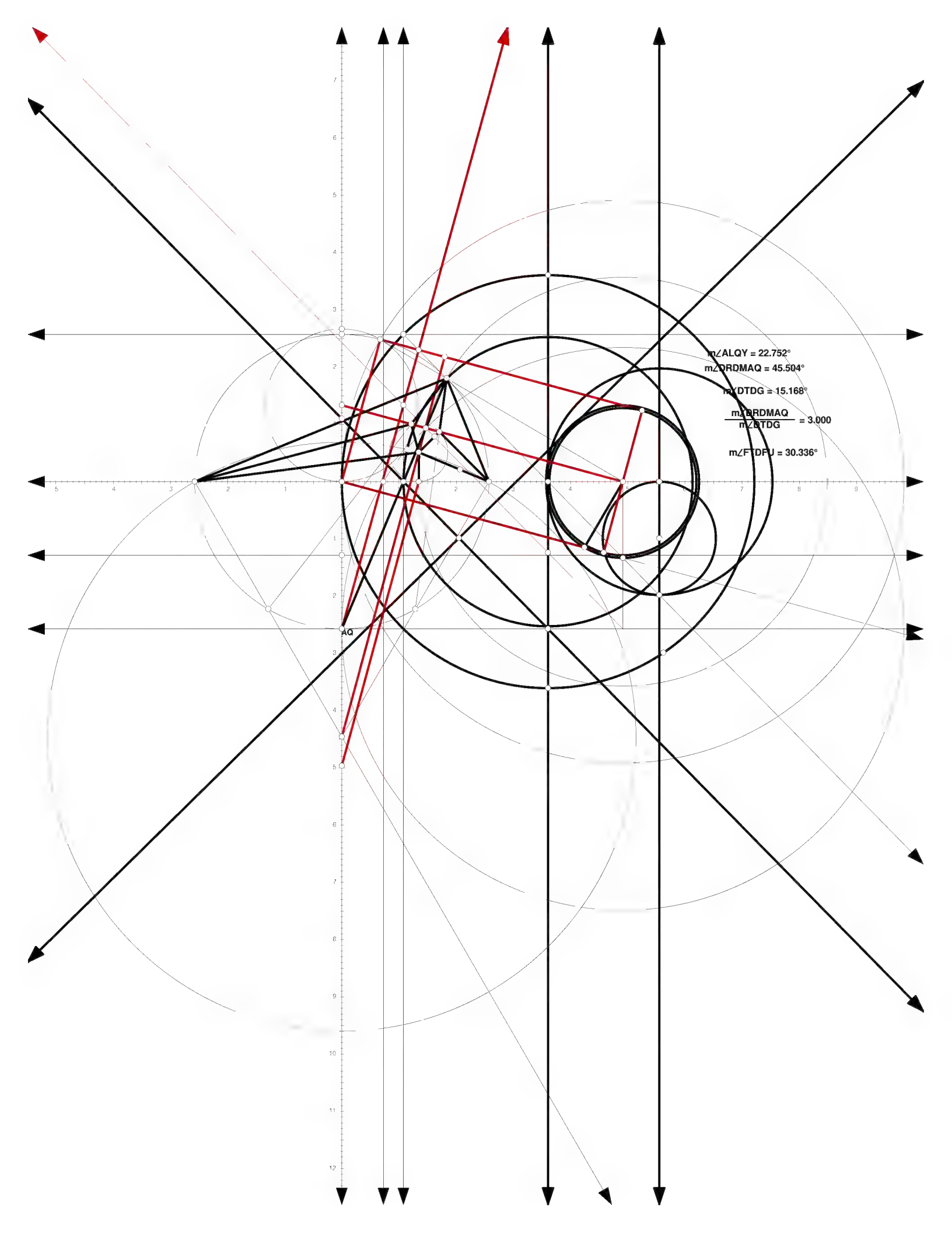
$m\angle AB_2C - 3 \cdot m\angle AB_2D = -0.000°$

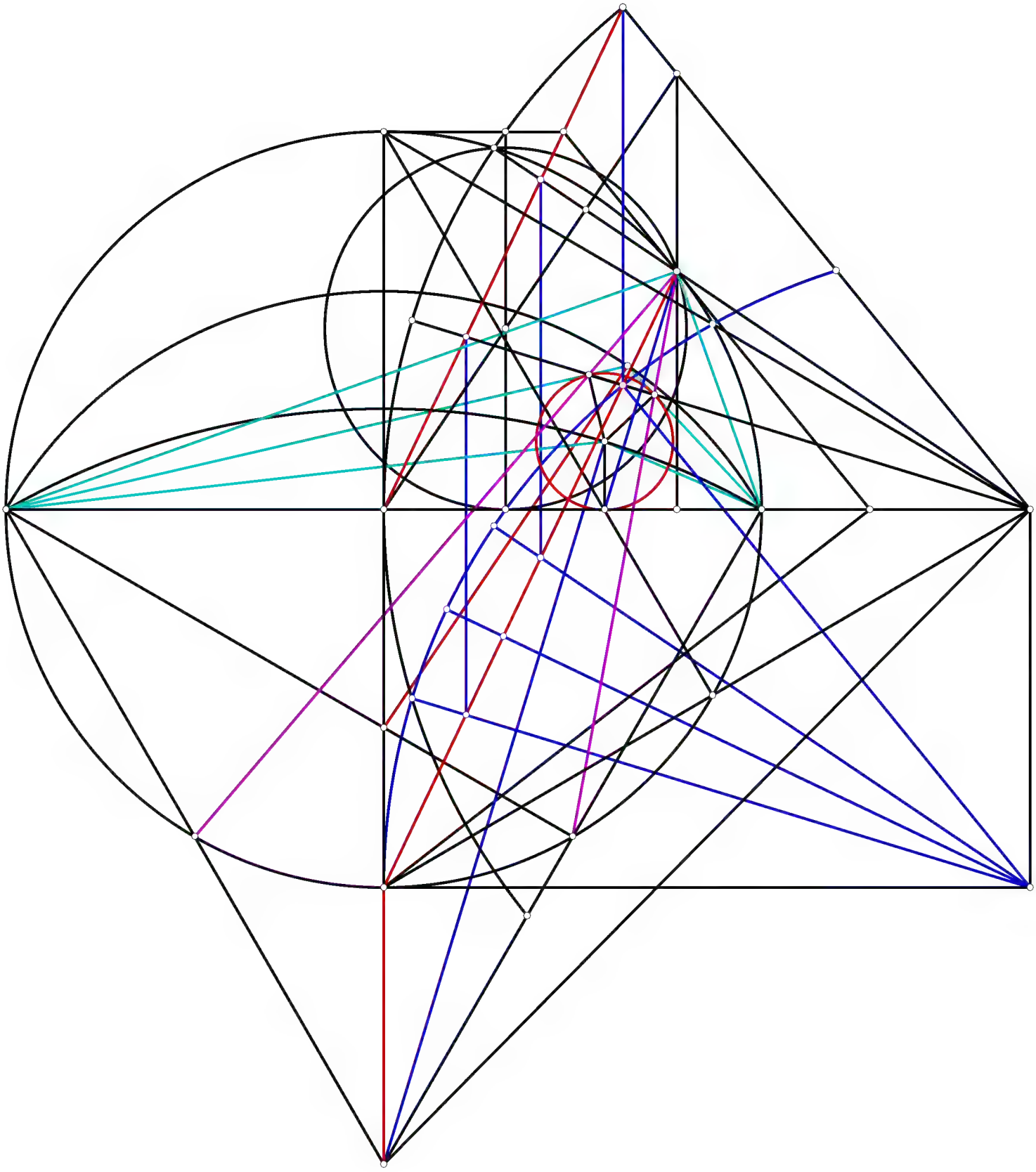
→ Move C->60 → Move C->75

The process is simple, construct point O and then bisect AOC. From point N construct P from the perpendicular L-which is the midpoint of NS.
Bisect APC constructing E and F which are bisected at point M. Draw S to M to construct point D.

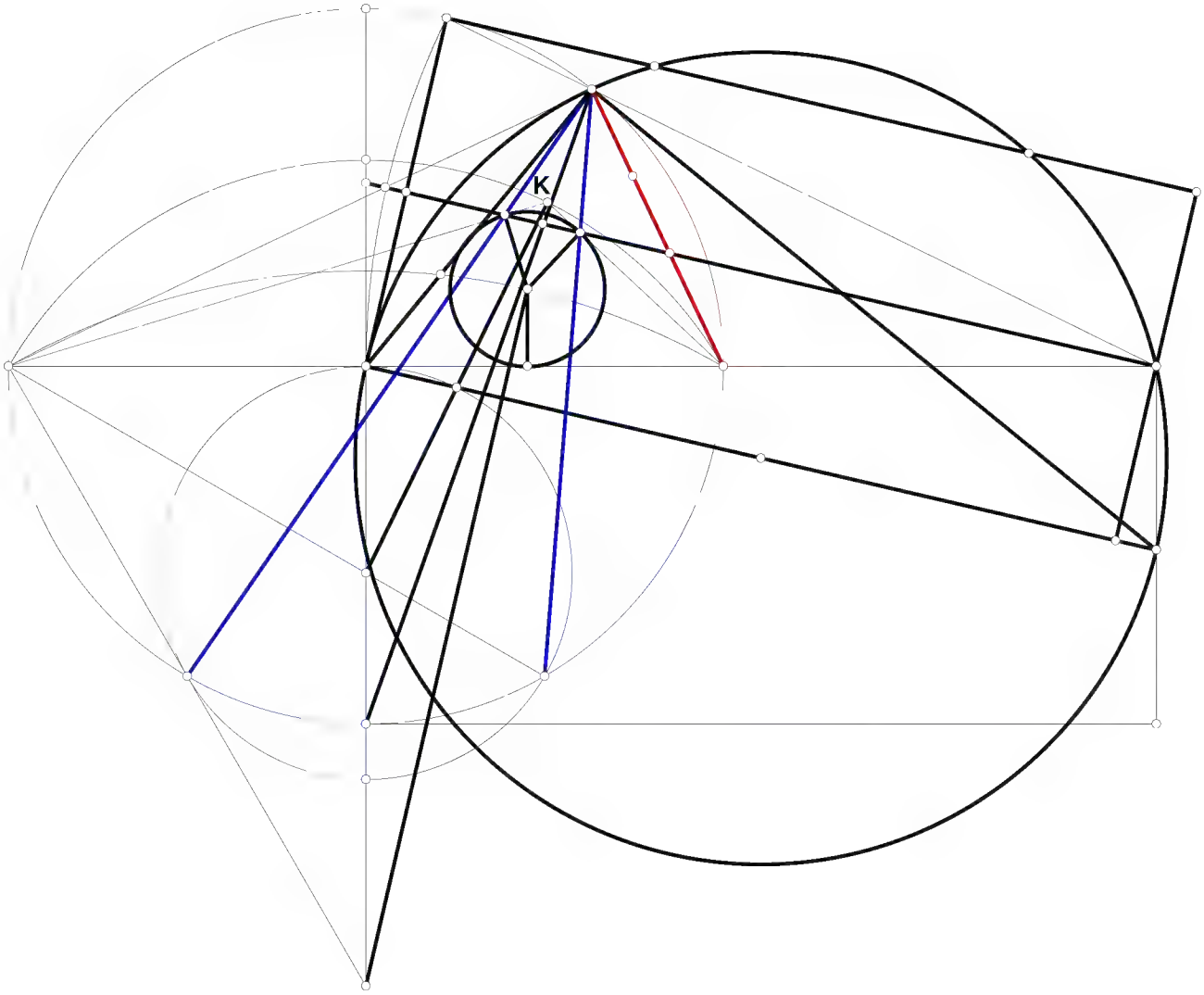
When there is no difference between two things, those things are said to be equal. This is true even of tolerance. If a figure is more accurate than the tools used to construct the figure, then that figure is equal, in that tool, to a solution that is tool independant.

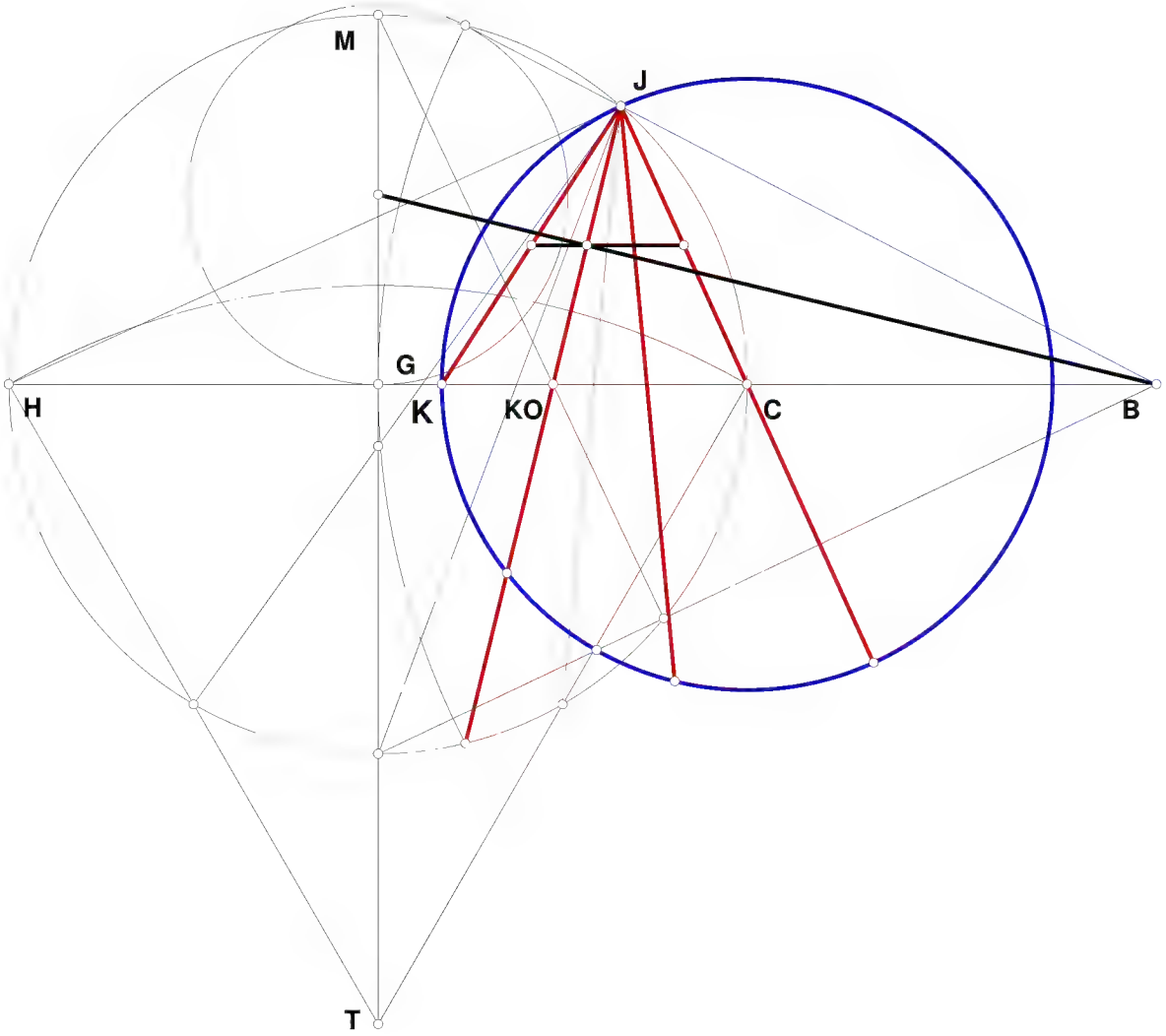

m∠HBD = 70.298°
m∠FBD = 23.433°
m∠HBD / m∠FBD = 3.000
m∠MLA = 90.000°
m∠HAL = 8.433°
m∠HDK / m∠HAL = 6.000
m∠DHM = 25.298°
m∠DHM / m∠HAL = 3.000
m∠HDK = 50.596°
m∠FAC = 9.043°
m∠HQD = 25.298°
m∠PQD = 8.433°
m∠HQD / m∠PQD = 3.000
m∠HAD = 33.731°
m∠HAD / m∠PQD = 4.000
m∠DEAD = 16.865°
m∠FEKD = 16.865°
K
J
H
L
EQ
G
F
I
Q
E
D
C
B
A
M


m∠ALQY = 22.752°
m∠DRDMAQ = 45.504°
m∠DTDG = 15.168°
m∠BRDMAQ / m∠DTDG = 3.000
m∠FTDFU = 30.336°
AQ



Pull K.




M
J
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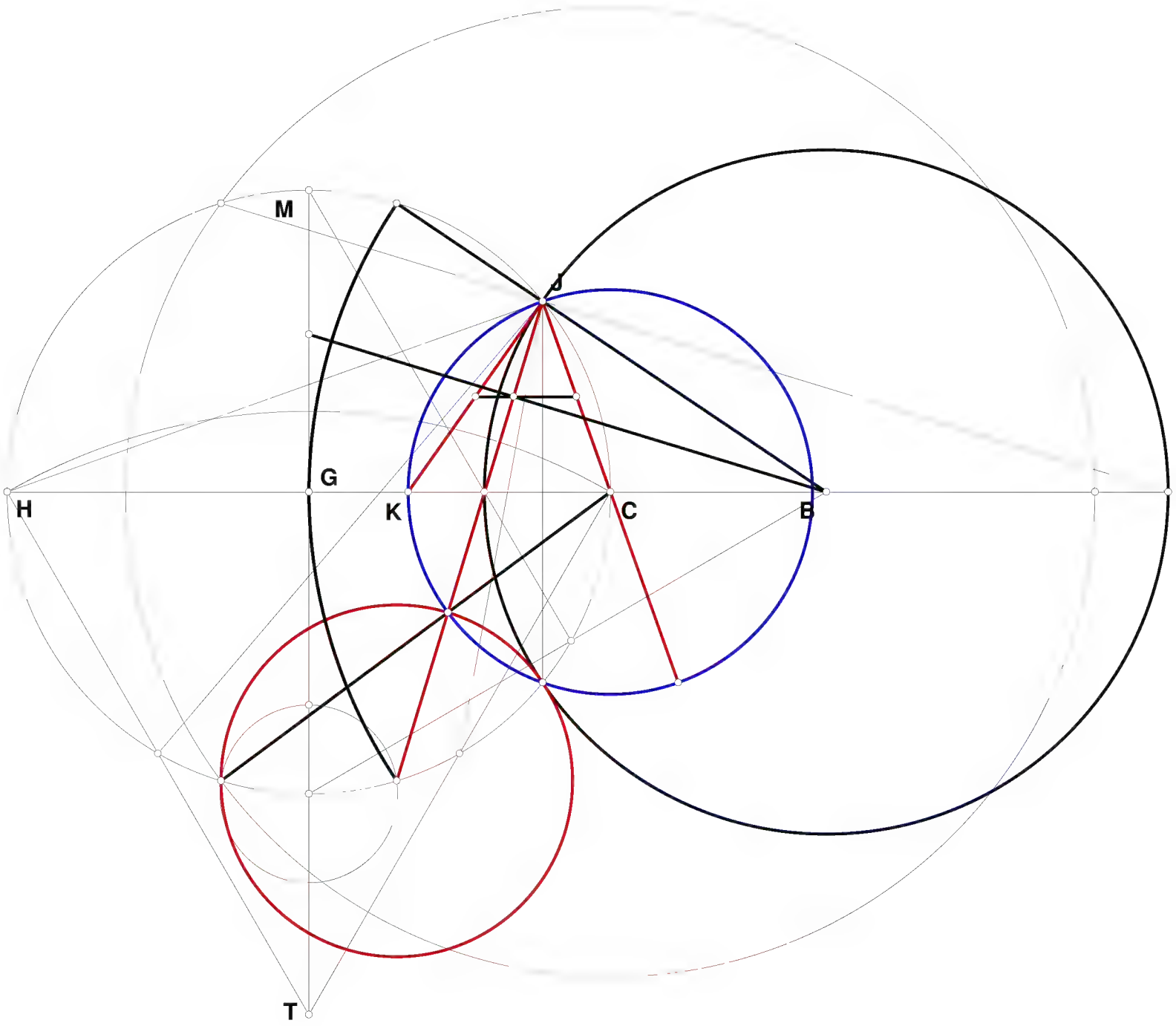
M
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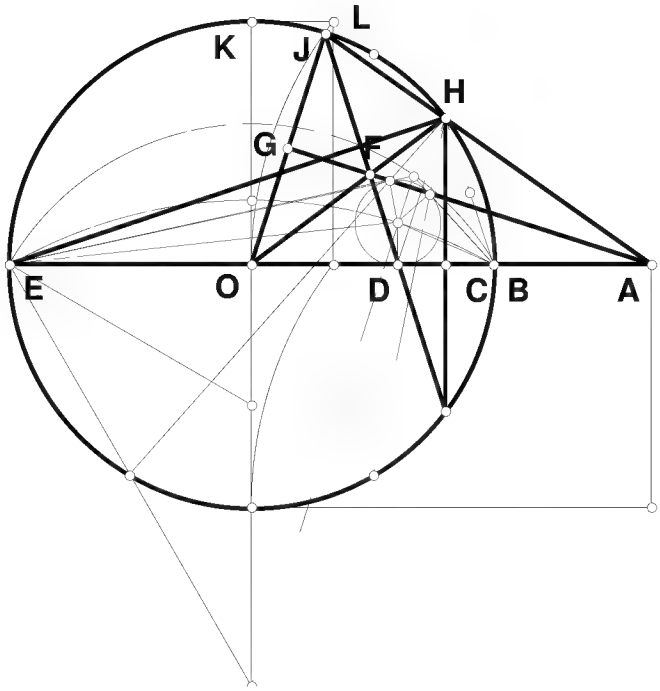
T

050601.MCD



Just some Algebraic Names

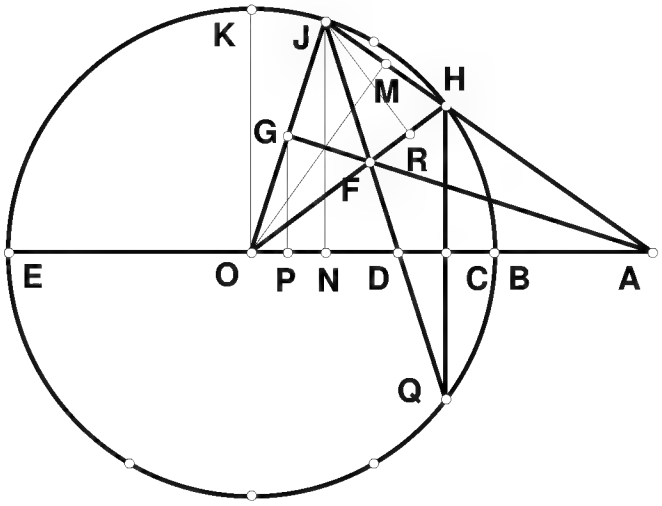
$AB := .818 \qquad N := 4.082$

$AE := AB \cdot N \quad BE := AE - AB$

$BO := \frac{BE}{2} \quad AO := AB + BO$

$AJ := AO \quad JO := BO \quad GO := \frac{JO}{2}$

$AG := \sqrt{AO^2 - GO^2}$



$AP := \frac{AG^2}{AO} \qquad OP := AO - AP$

$NO := 2 \cdot OP \quad AN := AO - NO$

$JM := NO \quad HO := BO$

$HJ := 2 \cdot JM \qquad AH := AJ - HJ$

$AC := \frac{AN \cdot AH}{AJ} \quad CH := \sqrt{AH^2 - AC^2}$

$HQ := 2 \cdot CH \quad CN := AN - AC$

$JN := \frac{CH \cdot AJ}{AH} \quad CQ := CH$

$JQ := \sqrt{(CQ + JN)^2 + CN^2} \qquad OR := \frac{JO^2 + HO^2 - HJ^2}{2 \cdot HO} \qquad JR := \sqrt{JO^2 - OR^2}$

$FO := \frac{JO \cdot GO}{OR} \qquad FJ := FO \quad DQ := \frac{JQ \cdot CQ}{CQ + JN} \qquad DF := JQ - (DQ + FJ) \qquad FH := HO - FO$

$FG := \frac{JR \cdot GO}{OR} \qquad AF := AG - FG$

$$AE - AB \cdot N = 0 \quad BE - (AB \cdot N - AB) = 0 \quad BO - \frac{1}{2} \cdot AB \cdot (N - 1) = 0$$

$$AO - \frac{1}{2} \cdot AB \cdot (1 + N) = 0 \qquad AG - \frac{AB}{4} \cdot \sqrt{(N + 3) \cdot (3 \cdot N + 1)} = 0$$

$$AP - \frac{AB}{8} \cdot (N + 3) \cdot \frac{(3 \cdot N + 1)}{(1 + N)} = 0 \qquad OP - \frac{AB}{8} \cdot \frac{(N - 1)^2}{(1 + N)} = 0 \qquad NO - \frac{AB}{4} \cdot \frac{(N - 1)^2}{(1 + N)} = 0$$

$$AN - \frac{AB}{4} \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1 + N)} = 0 \qquad HJ - \frac{AB}{2} \cdot \frac{(N - 1)^2}{(1 + N)} = 0 \qquad AH - 2 \cdot AB \cdot \frac{N}{(1 + N)} = 0$$

$$AC - AB \cdot \left(1 + 6 \cdot N + N^2\right) \cdot \frac{N}{(1 + N)^3} = 0 \qquad CH - AB \cdot N \cdot \sqrt{N + 3} \cdot \sqrt{3 \cdot N + 1} \cdot \frac{(N - 1)}{(1 + N)^3} = 0$$

$$HQ - 2 \cdot AB \cdot N \cdot \sqrt{N + 3} \cdot \sqrt{3 \cdot N + 1} \cdot \frac{(N - 1)}{(1 + N)^3} = 0 \quad CN - \frac{AB}{4} \cdot \left(N^2 + 6 \cdot N + 1\right) \cdot \frac{(N - 1)^2}{(1 + N)^3} = 0$$

$$JN - \frac{AB}{4} \cdot (N - 1) \cdot \sqrt{3 \cdot N + 1} \cdot \frac{\sqrt{N + 3}}{(1 + N)} = 0 \qquad JQ - \frac{AB}{2} \cdot (N - 1) \cdot \frac{\left(N^2 + 6 \cdot N + 1\right)}{(1 + N)^2} = 0$$

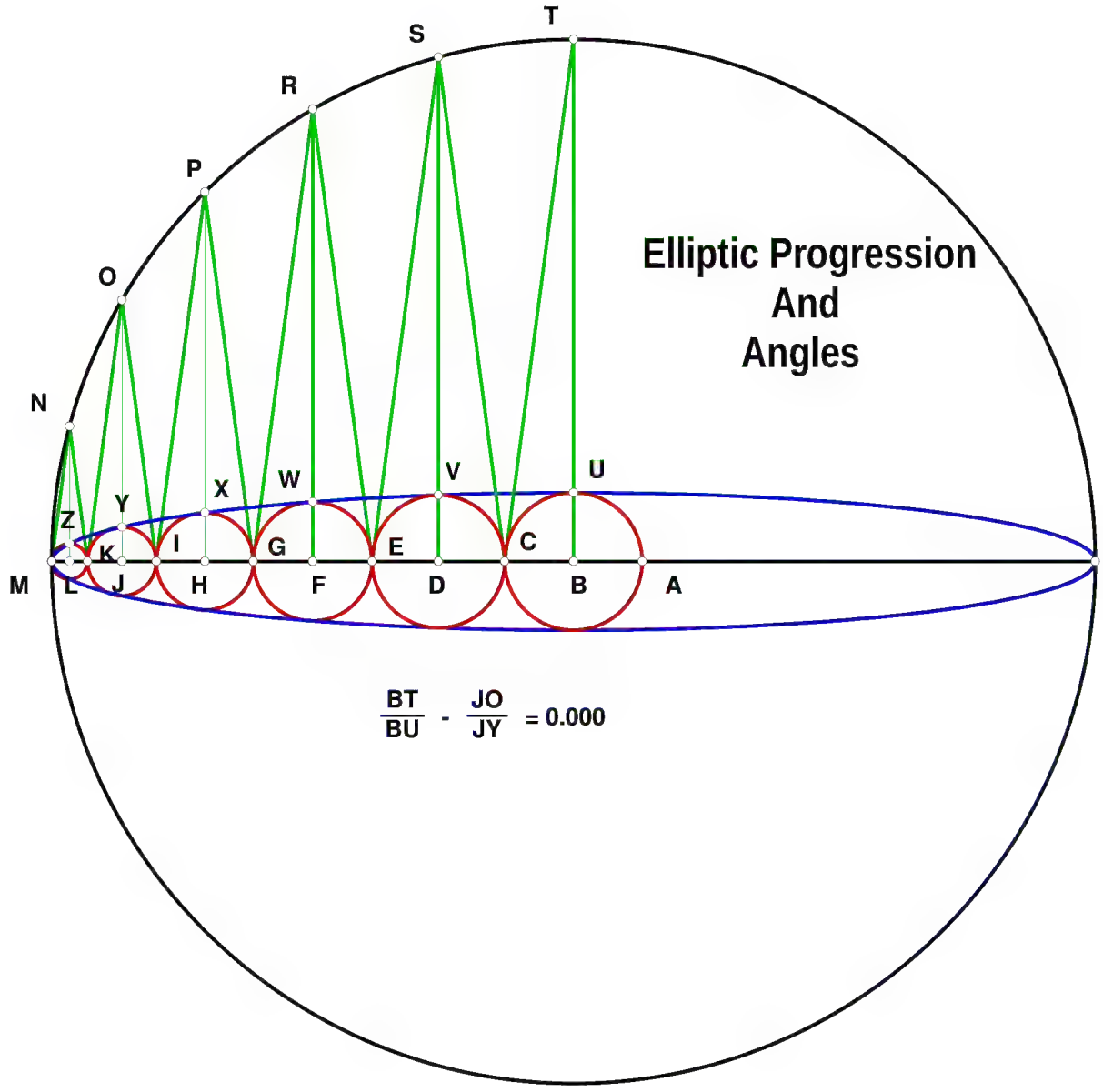
$$OR - \frac{AB}{4} \cdot \left(N^2 + 6 \cdot N + 1\right) \cdot \frac{(N - 1)}{(1 + N)^2} = 0 \qquad JR - \frac{AB}{4} \cdot (N - 1)^2 \cdot \sqrt{N + 3} \cdot \frac{\sqrt{3 \cdot N + 1}}{(1 + N)^2} = 0$$

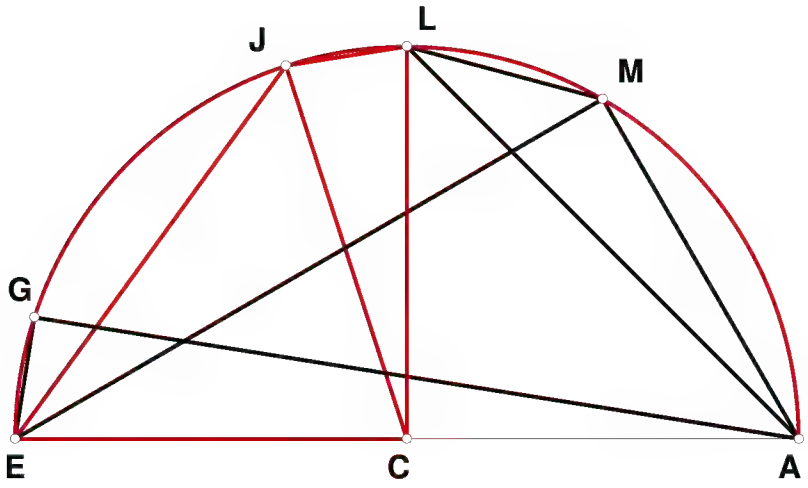
$$FO - \frac{AB}{2} \cdot (1 + N)^2 \cdot \frac{(N - 1)}{\left(N^2 + 6 \cdot N + 1\right)} = 0 \qquad DQ - 2 \cdot N \cdot (N - 1) \cdot \frac{AB}{(1 + N)^2} = 0$$

$$DF - 2 \cdot N \cdot (N - 1) \cdot \frac{AB}{\left(N^2 + 6 \cdot N + 1\right)} = 0 \qquad FH - 2 \cdot N \cdot (N - 1) \cdot \frac{AB}{\left(N^2 + 6 \cdot N + 1\right)} = 0$$

$$FG - \frac{AB}{4} \cdot (N - 1)^2 \cdot \sqrt{N + 3} \cdot \frac{\sqrt{3 \cdot N + 1}}{\left(N^2 + 6 \cdot N + 1\right)} = 0 \qquad GO - \frac{AB}{4} \cdot (N - 1) = 0$$

$$AF - \left[\frac{AB}{4} \cdot \sqrt{(N + 3) \cdot (3 \cdot N + 1)} - \frac{1}{4} \cdot AB \cdot (N - 1)^2 \cdot \sqrt{N + 3} \cdot \frac{\sqrt{3 \cdot N + 1}}{\left(N^2 + 6 \cdot N + 1\right)} \right] = 0$$


T
S
R
P
O
N
Elliptic Progression
And
Angles
U
V
W
X
Y
Z
C
E
G
I
K
A
B
D
F
H
J
L
M
BT/BU - JO/JY = 0.000

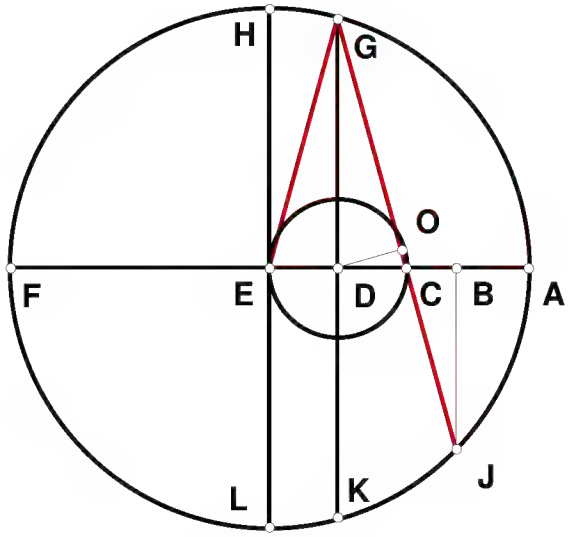


$$EM := \frac{1}{2}\cdot\sqrt{3} \qquad AL := \frac{1}{2}\cdot\sqrt{2} \qquad JL := \frac{1}{4}\cdot\sqrt{8 - 2\cdot\sqrt{10 + 2\cdot\sqrt{5}}} \qquad LM := \frac{1}{4}\cdot\sqrt{6} - \frac{1}{4}\cdot\sqrt{2}$$

$$AM := \frac{1}{2} \qquad EJ := \frac{1}{4}\cdot\sqrt{10 - 2\cdot\sqrt{5}}$$

$$AG := \frac{1}{4}\cdot\sqrt{8 + 2\cdot\sqrt{10 + 2\cdot\sqrt{5}}}$$

Elliptic Progression Outtake One 0507011



A method of trisection Algebraically.

$N := M$

$N \geq 4 = 1 \qquad AF := 6 \qquad AE := \frac{AF}{2}$

$DE := \frac{AF}{N} \qquad AD := AE - DE \qquad DF := AF - AD$

$DG := \sqrt{AD \cdot DF} \qquad CD := DE \qquad EG := AE$

$CO := \frac{CD^2}{EG} \qquad CG := EG \qquad CJ := CG - 4 \cdot CO$

$BC := \frac{CD \cdot CJ}{CG} \qquad AB := AE - (2 \cdot DE + BC)$

$BJ := \frac{DG \cdot BC}{CD} \qquad BD := BC + CD$

$JK := \sqrt{DG^2 - 2 \cdot DG \cdot BJ + BJ^2 + BD^2} \qquad \frac{JK}{2 \cdot DE} = 1$ **Some Algebraic Names,**

Part of this demonstration may be something of a reductio ad absurdum, if one supposed that CJ were not true. I suppose I need a plate to demonstrate it.

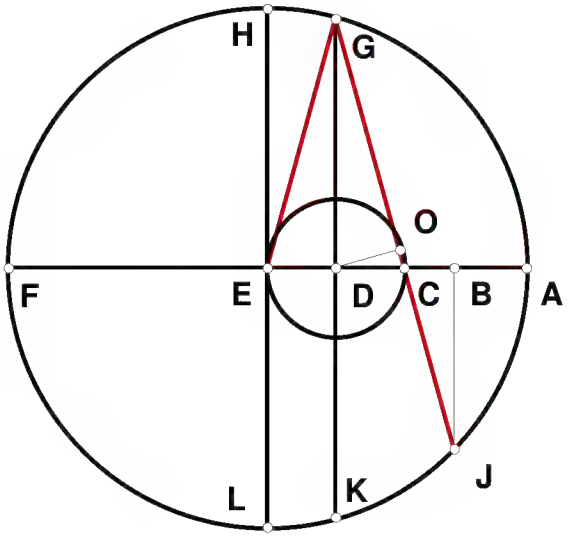
$AF \cdot \frac{(N-2)}{2 \cdot N} - AD = 0 \qquad AF \cdot \frac{(N+2)}{2 \cdot N} - DF = 0 \qquad AF \cdot \frac{\sqrt{(N-2) \cdot (N+2)}}{2 \cdot N} - DG = 0$

$\frac{2\ AF}{N^2} - CO = 0 \qquad AF \cdot \frac{(N-4) \cdot (N+4)}{2 \cdot N^2} - CJ = 0 \qquad AF \cdot \frac{(N-4) \cdot (N+4)}{N^3} - BC = 0$

$AF \cdot \frac{(N+2) \cdot (N-4)^2}{2 \cdot N^3} - AB = 0$ **One of the meanings of trisection is solving for the following equation when given AF and AB.**

$\frac{AF}{AB} - \frac{2 \cdot N^3}{(N+2) \cdot (N-4)^2} = 0$

$AF \cdot \frac{(N-4) \cdot (N+4) \cdot \sqrt{(N-2) \cdot (N+2)}}{2 \cdot N^3} - BJ = 0 \qquad AF \cdot \frac{2 \cdot (N^2 - 8)}{N^3} - BD = 0 \qquad \frac{2 \cdot AF}{N} - JK = 0$



$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} - \frac{AF}{AB} = 0 \qquad \frac{AF}{AB} = 6$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} - 6 = 0$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} = 6$$

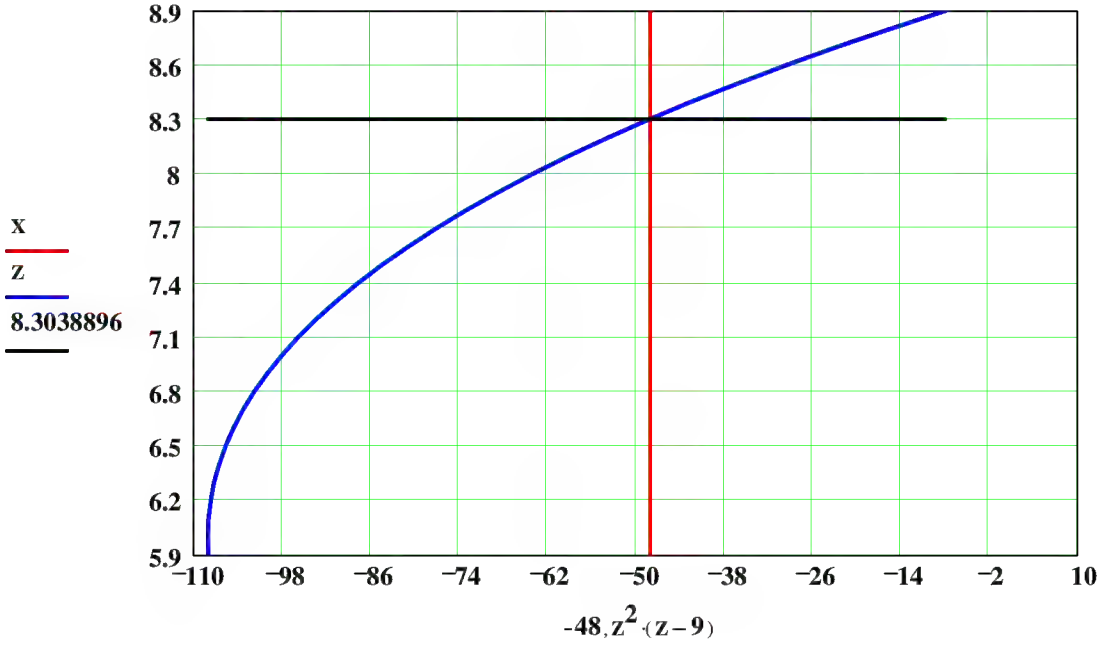
$$2\cdot M^3 - 6\cdot\left[(M+2)\cdot(M-4)^2\right] = 0$$

$$2\cdot M^3 - \left(6\cdot M^3 - 36\cdot M^2 + 192\right) = 0$$

$$4\cdot M^3 - 36\cdot M^2 + 192 = 0$$

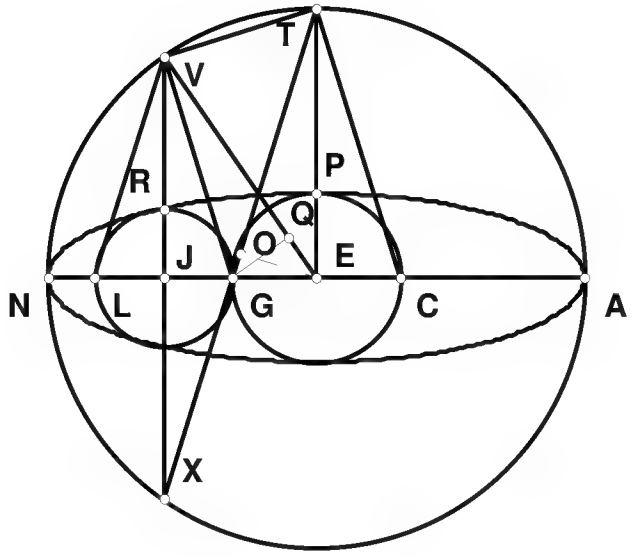
$$M^3 - 9\cdot M^2 + 48 = 0 \qquad M^2\cdot(M-9) + 48 = 0 \qquad M \equiv 8.303889634816388$$

$$\frac{2\cdot M^3}{(M+2)\cdot(M-4)^2} = 6 \qquad DE - \frac{AF}{M} = 0 \qquad Z := 5.9, 6 .. 8.9$$



Elliptic Progression Outtake Two 0507012

Angles TEV and EVJ equals CTG.



$N := 6.381 \quad AN := 2.792$

$EN := \frac{AN}{2} \quad ET := EN \quad EV := EN$

$EG := \frac{AN}{N} \quad EP := EG \quad GT := \sqrt{EG^2 + ET^2}$

$GO := \frac{EG^2}{GT} \quad GX := GT - 2 \cdot GO$

$JX := \frac{ET \cdot GX}{GT} \quad GJ := \frac{EG \cdot GX}{GT}$

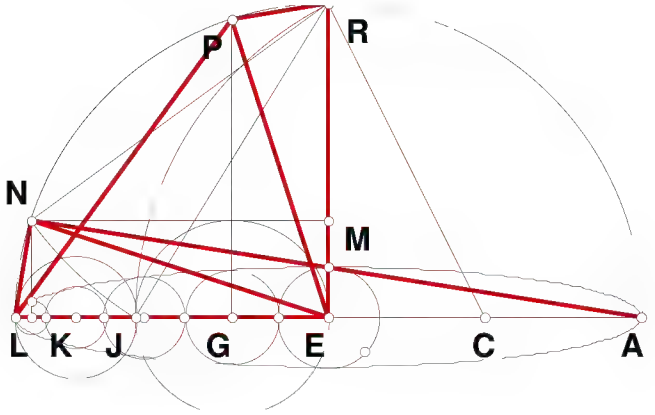
$\frac{ET}{EP} - \frac{JX}{GJ} = 0 \quad JV := JX$

$EJ := EG + GJ$

$TV := \sqrt{ET^2 - 2 \cdot ET \cdot JV + JV^2 + EJ^2}$

$\frac{ET}{TV} - \frac{GT}{2 \cdot EG} = 0 \quad EQ := \frac{EJ \cdot EG}{EV} \quad OQ := \frac{JV \cdot EQ}{EJ} \quad OQ - GJ = 0$

Outtake Three: Alternate Method: Pentasection Or Irrational Rationals 0507013



$$AL := 1 \qquad AE := \frac{AL}{2} \qquad AC := \frac{AE}{2}$$

$$CE := AC \quad ER := AE \quad CR := \sqrt{CE^2 + ER^2}$$

$$CJ := CR \qquad EJ := CJ - CE$$

$$JR := \sqrt{EJ^2 + ER^2} \quad NR := JR$$

$$EN := AE \quad EM := \frac{EN^2 + ER^2 - NR^2}{2 \cdot ER}$$

$$KN := EM \quad EK := \sqrt{EN^2 - KN^2} \quad EL := AE \qquad KL := EL - EK \qquad LN := \sqrt{KL^2 + KN^2}$$

$$EG := \frac{EJ}{2} \qquad GL := EL - EG \quad AG := AE + EG \qquad GP := \sqrt{AG \cdot GL} \qquad PR := \sqrt{ER^2 - 2 \cdot ER \cdot GP + GP^2 + EG^2}$$

$$PR - LN = 0 \qquad AN := \sqrt{AL^2 - LN^2}$$

Irrational **means the inability of a grammar to provide a name for a given thing. Many things are then irrational in Arithmetic due to the principles of the naming convention. Algebraic naming solves the problem by incorporating operands as part of a name. Algebra provides a degree of rationality then that is not achievable by Arithmetic. The following are some Algebraic names.**

$$\frac{1}{2} - AE = 0 \qquad \frac{1}{4} - AC = 0 \qquad \frac{1}{4} \cdot \sqrt{5} - CR = 0 \qquad \frac{1}{4} \cdot \sqrt{5} - \frac{1}{4} - EJ = 0 \qquad \frac{1}{4} \cdot \sqrt{10 - 2 \cdot \sqrt{5}} - JR = 0$$

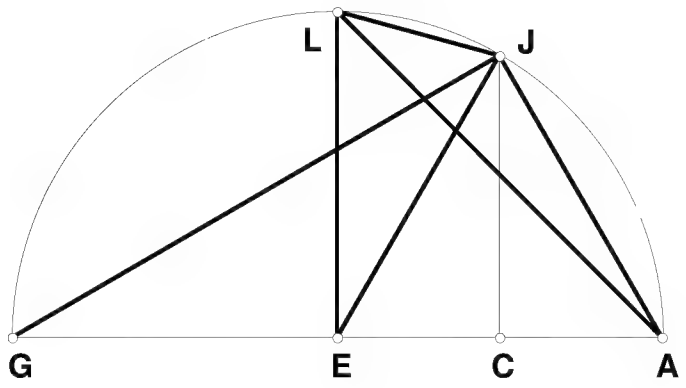
$$\frac{-1}{8} + \frac{1}{8} \cdot \sqrt{5} - EM = 0 \qquad \frac{1}{2} \cdot \sqrt{\frac{5}{8} + \frac{1}{8} \cdot \sqrt{5}} - EK = 0 \qquad \frac{1}{2} - \frac{1}{8} \cdot \sqrt{10 + 2 \cdot \sqrt{5}} - KL = 0$$

$$\frac{1}{4} \cdot \sqrt{8 - 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - LN = 0 \qquad \frac{-1}{8} + \frac{1}{8} \cdot \sqrt{5} - EG = 0 \qquad \frac{5}{8} - \frac{1}{8} \cdot \sqrt{5} - GL = 0$$

$$\frac{3}{8} + \frac{1}{8} \cdot \sqrt{5} - AG = 0 \qquad \frac{1}{8} \cdot \sqrt{10 + 2 \cdot \sqrt{5}} - GP = 0 \qquad \frac{1}{4} \cdot \sqrt{8 - 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - PR = 0$$

$$\frac{1}{4} \cdot \sqrt{8 + 2 \cdot \sqrt{10 + 2 \cdot \sqrt{5}}} - AN = 0$$

Outtake Four: Some Names 0507014



$AG := 1 \quad AE := \frac{AG}{2} \quad AC := \frac{AE}{2}$

$CG := AG - AC \quad CJ := \sqrt{AC \cdot CG}$

$EL := AE \quad CE := AC$

$JL := \sqrt{EL^2 - 2 \cdot EL \cdot CJ + CJ^2 + CE^2}$

$AJ := \sqrt{AC^2 + CJ^2} \quad GJ := \sqrt{CG^2 + CJ^2}$

$AL := \sqrt{AE^2 + EL^2}$

$AE := \frac{1}{2} \quad AC := \frac{1}{4} \quad CG := 1 - \frac{1}{4} \quad CJ := \frac{1}{4} \cdot \sqrt{3} \quad JL := \frac{1}{4} \cdot \sqrt{6} - \frac{1}{4} \cdot \sqrt{2}$

$AJ := \frac{1}{2} \quad GJ := \frac{1}{2} \cdot \sqrt{3} \quad AL := \frac{1}{2} \cdot \sqrt{2}$

Angles and the Ellipse 050801.mcd

$AC := 1 \qquad CP := \sqrt{2\ AC^2}$

$AP := AC \qquad EP := CP$

$CE := \sqrt{AC^2 + (AP + EP)^2}$

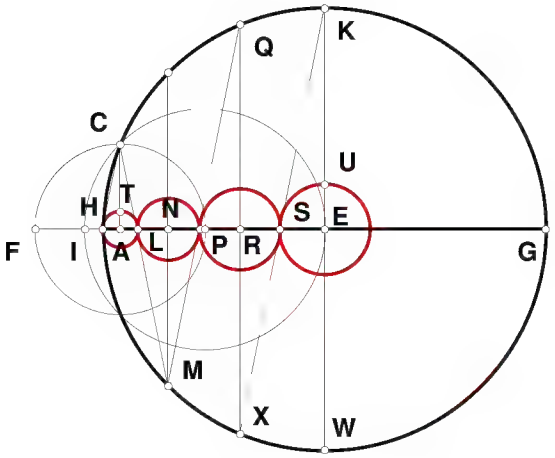
$EK := CE \quad EH := CE$

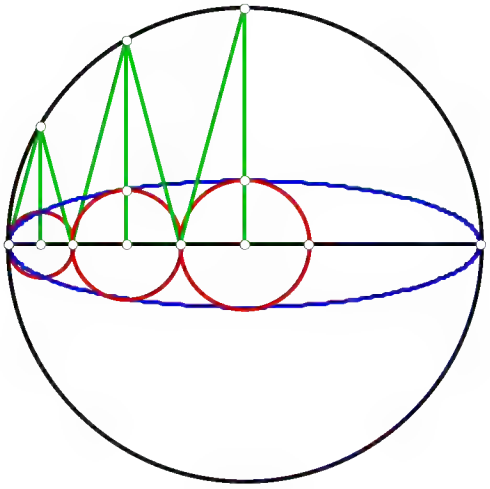
$AE := \sqrt{CE^2 - AC^2}$

$AH := EH - AE$

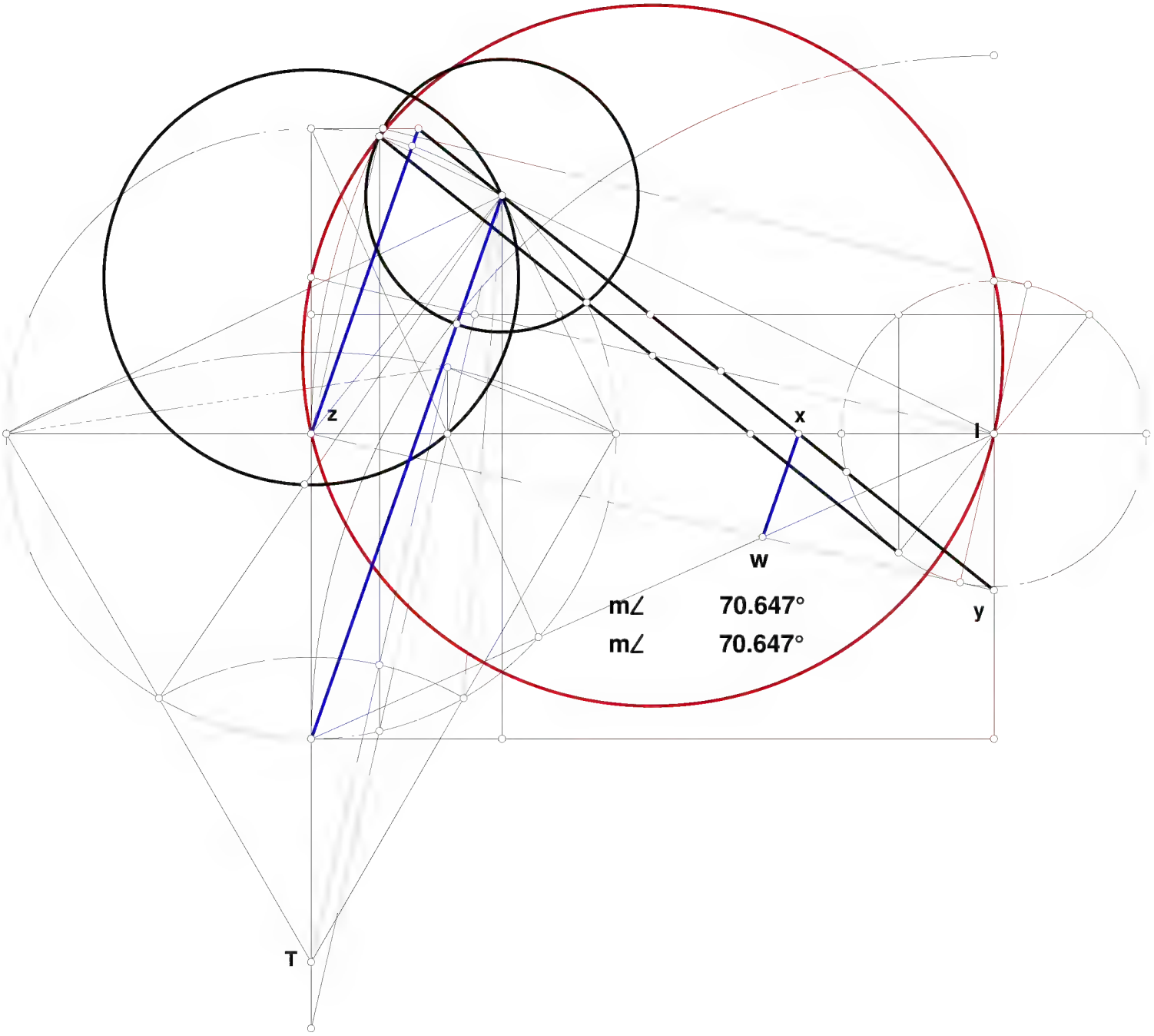
$AT := AH \qquad EU := \frac{AT \cdot EK}{AC}$

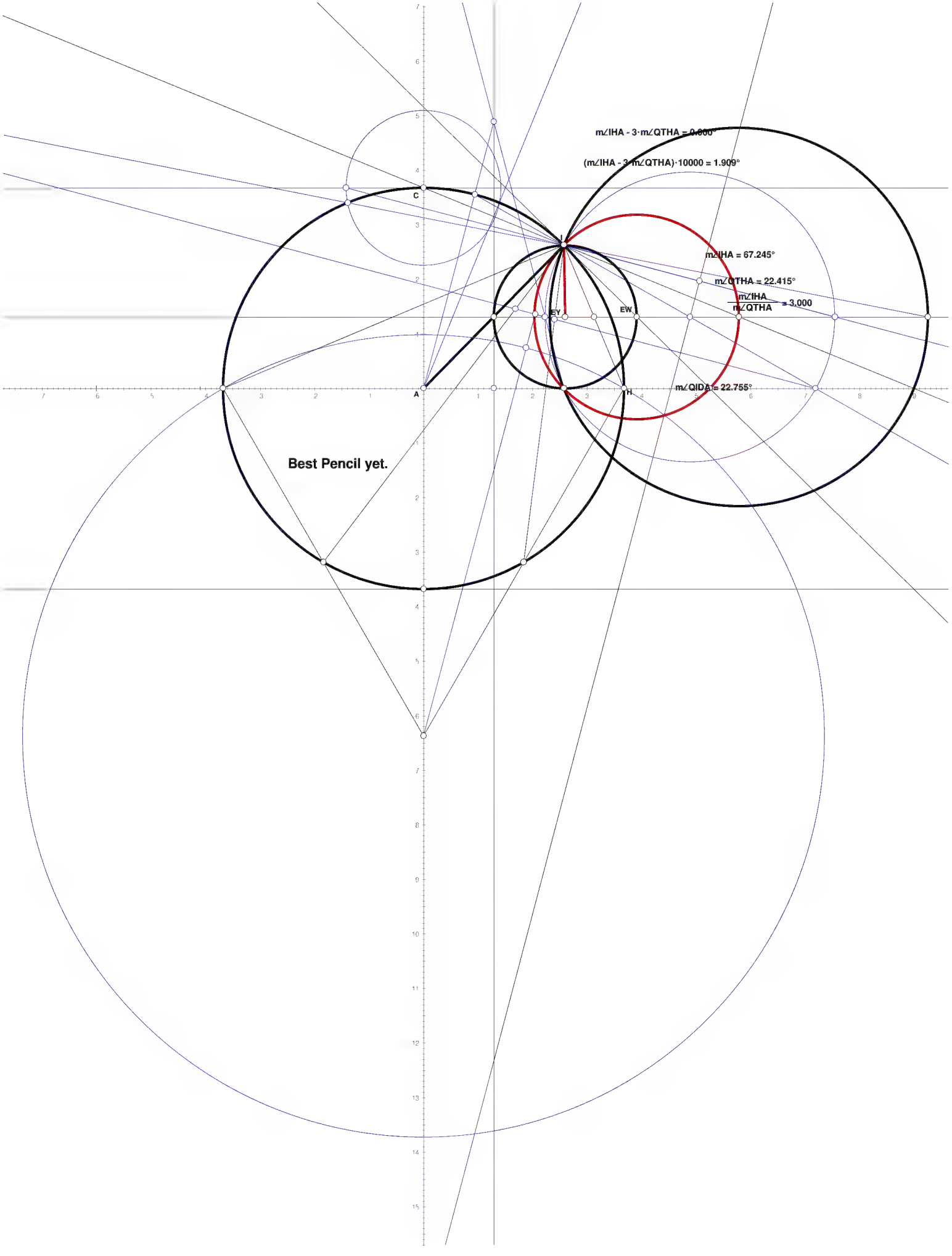
$\frac{EK}{EU} - \left(1 + \sqrt{2} + \sqrt{2} \cdot \sqrt{2 + \sqrt{2}}\right) = 0$

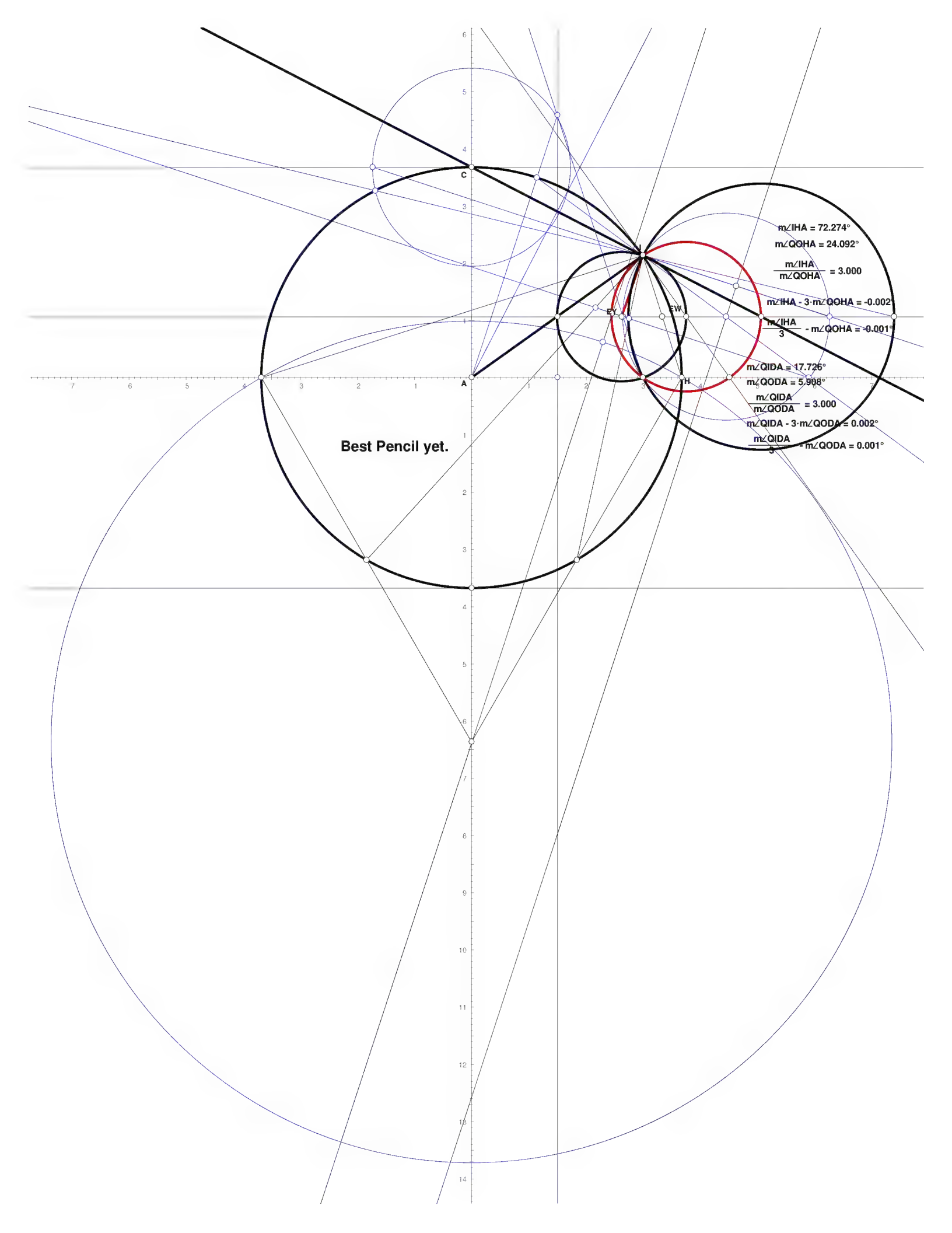


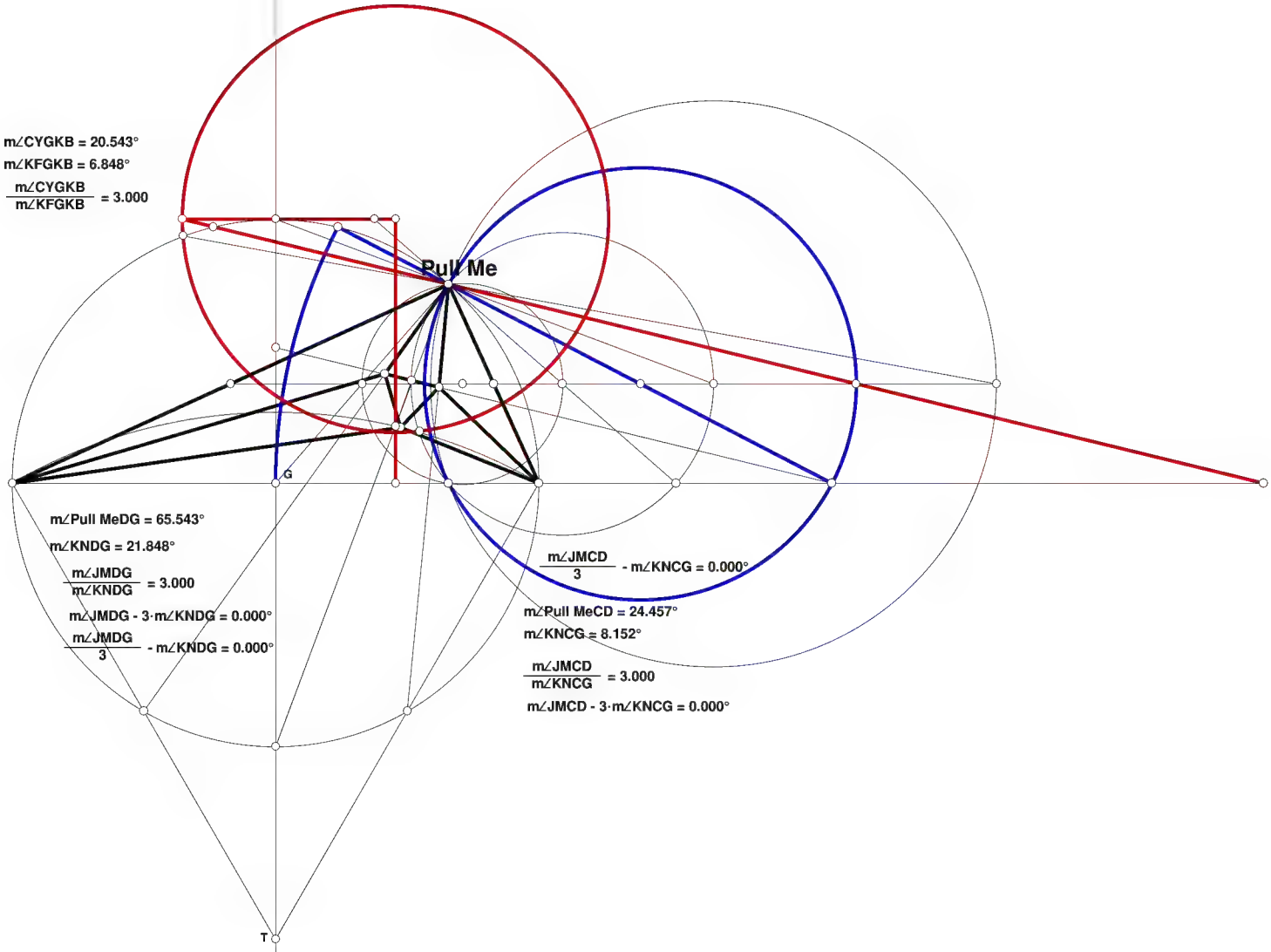


An Elliptic Progression takes place on a finite length of line. An Elliptic Progression may be defined in terms of a number of diameters of smaller circles, each defined by the same angle from the circumferance of the larger circle and from the center of a circle to its perimeter. When the sum of the number of those diameters minus one half the starting diameter are equal to the radius of the larger circle, the angle that defined the smaller circles will divide the larger circle evenly and the same number of times as the total number of smaller circles. This means that the division of a circle into equal angles may be expressed as an elliptic function.


z
x
l
w
y
m∠ 70.647°
m∠ 70.647°
T

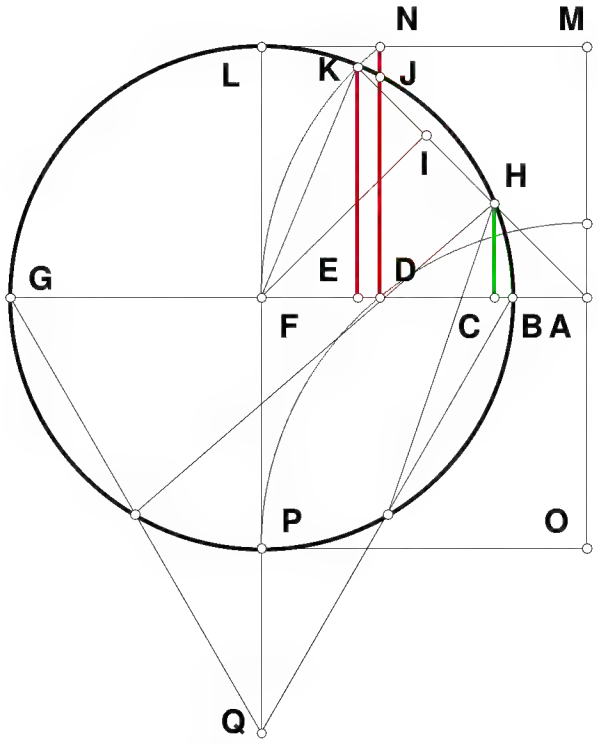

m∠IHA - 3·m∠QTHA = 0.000°
(m∠IHA - 3·m∠QTHA)·10000 = 1.909°
C
I
m∠IHA = 67.245°
m∠QTHA = 22.415°
m∠IHA / m∠QTHA = 3.000
EY
EW
A
H
m∠QIDA = 22.755°
Best Pencil yet.


C
A
H
I
EV
EW
m∠IHA = 72.274°
m∠QOHA = 24.092°
m∠IHA / m∠QOHA = 3.000
m∠IHA - 3·m∠QOHA = -0.002°
m∠IHA / 3 - m∠QOHA = -0.001°
m∠QIDA = 17.726°
m∠QODA = 5.908°
m∠QIDA / m∠QODA = 3.000
m∠QIDA - 3·m∠QODA = 0.002°
m∠QIDA / 3 - m∠QODA = 0.001°
Best Pencil yet.


m∠CYGKB = 20.543°
m∠KFGKB = 6.848°
m∠CYGKB / m∠KFGKB = 3.000
Pull Me
G
T
m∠Pull MeDG = 65.543°
m∠KNDG = 21.848°
m∠JMDG / m∠KNDG = 3.000
m∠JMDG - 3·m∠KNDG = 0.000°
m∠JMDG / 3 - m∠KNDG = 0.000°
m∠JMCD / 3 - m∠KNCG = 0.000°
m∠Pull MeCD = 24.457°
m∠KNCG = 8.152°
m∠JMCD / m∠KNCG = 3.000
m∠JMCD - 3·m∠KNCG = 0.000°

On Trisection 051301

For any given trisection what is the Algebraic names of BC and BE taking BG as unit?



$N := 9 \qquad BG := 1 \qquad AG := BG \cdot N$

$AB := AG - BG \qquad BF := \frac{BG}{2}$

$AF := AB + BF \qquad AN := AF \qquad AK := AN$

$FK := BF \qquad S_1 := AF \qquad S_2 := AK \qquad S_3 := FK$

$AE := \frac{S_2^2 + S_1^2 - S_3^2}{2 \cdot S_1} \qquad AI := AE$

$IK := AK - AI \qquad HI := IK \qquad AH := AK - (HI + IK)$

$AC := \frac{AE \cdot AH}{AK} \qquad BC := AC - AB \qquad BE := AE - AB$

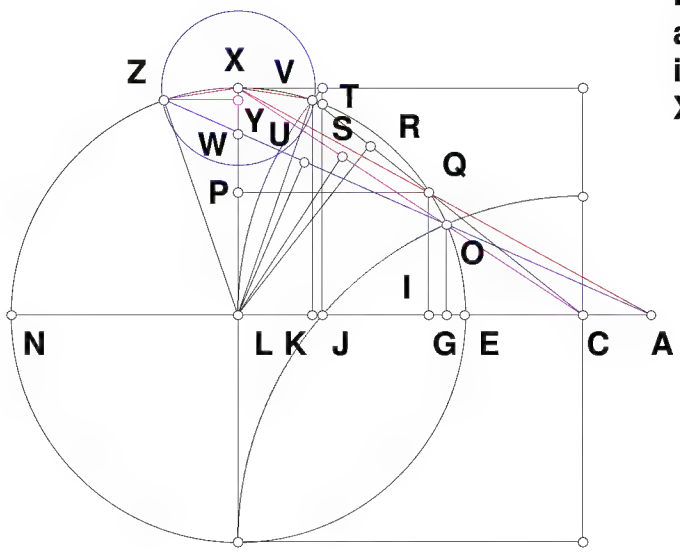
Some Algebraic Names:

$N - 1 - AB = 0 \qquad \frac{1}{2} - BF = 0 \qquad \frac{1}{2} \cdot (2 \cdot N - 1) - AF = 0 \qquad \frac{1}{4} \cdot \frac{\left(8 \cdot N^2 - 8 \cdot N + 1\right)}{(2 \cdot N - 1)} - AE = 0$

$\frac{1}{4} \cdot \frac{1}{(2 \cdot N - 1)} - IK = 0 \qquad 2 \cdot N \cdot \frac{(N - 1)}{(2 \cdot N - 1)} - AH = 0 \qquad \frac{\left(8 \cdot N^2 - 8 \cdot N + 1\right)}{(2 \cdot N - 1)^3} \cdot N \cdot (N - 1) - AC = 0$

$(N - 1)^2 \cdot \frac{(4 \cdot N - 1)}{(2 \cdot N - 1)^3} - BC = 0 \qquad \frac{1}{4} \cdot \frac{(-3 + 4 \cdot N)}{(2 \cdot N - 1)} - BE = 0$

On Trisection 051401.MCD



For any given QLX, XLZ is 1/3 of that angle. What are the Algebraic names in this figure for the cords QX and XZ?

$N := 5 \qquad CE := 1 \qquad CN := CE \cdot N$

$EN := CN - CE \qquad EL := \frac{EN}{2} \qquad LV := EL$

$CL := CE + EL$

$CV := CL \qquad S_1 := CL \qquad S_2 := CV$

$S_3 := LV \qquad CK := \frac{S_2^2 + S_1^2 - S_3^2}{2 \cdot S_1}$

$CR := CK \qquad RV := CV - CR \qquad QR := RV \qquad CQ := CV - (QR + RV) \qquad CI := \frac{CK \cdot CQ}{CV} \qquad EI := CI - CE$

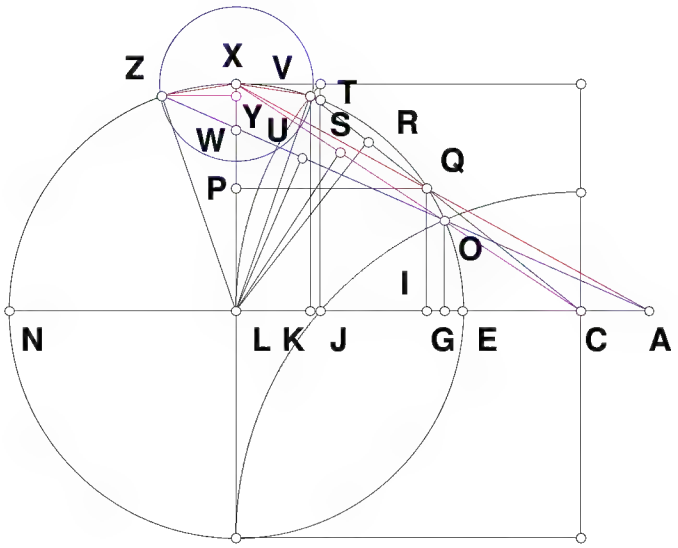
$IN := EN - EI \qquad IQ := \sqrt{EI \cdot IN} \qquad LP := IQ \qquad LX := EL \qquad IL := EL - EI \qquad PX := LX - LP \qquad AL := \frac{IL \cdot LX}{PX}$

$AE := AL - EL \qquad AC := AE - CE \qquad AI := AC + CI \qquad AX := \sqrt{AL^2 + LX^2} \qquad AQ := \frac{AX \cdot AI}{AL} \qquad QX := AX - AQ$

$CX := \sqrt{CL^2 + LX^2} \qquad CS := \frac{CL^2}{CX} \qquad SX := CX - CS \qquad OS := SX \qquad CO := CX - (SX + OS)$

$GO := \frac{LX \cdot CO}{CX} \qquad CG := \frac{CL \cdot CO}{CX} \qquad EG := CG - CE \qquad AG := AE + EG \qquad AO := \sqrt{AG^2 + GO^2}$

$AU := \frac{AG \cdot AL}{AO} \qquad OU := AU - AO \qquad UZ := OU \qquad AZ := AO + (OU + UZ)$



$$LW := \frac{GO \cdot AL}{AG} \qquad AW := \frac{AO \cdot AL}{AG}$$

$$WZ := AZ - AW \qquad WY := \frac{GO \cdot WZ}{AO}$$

$$YZ := \frac{AG \cdot WZ}{AO} \qquad YX := LX - (LW + WY)$$

$$XZ := \sqrt{YX^2 + YZ^2}$$

Some Algebraic Names:

$$\frac{1}{2} \cdot CE \cdot N - \frac{1}{2} \cdot CE - EL = 0 \qquad \frac{1}{4} \cdot CE \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1 + N)} - CK = 0 \qquad \frac{1}{4} \cdot CE \cdot \frac{\left(1 + N^2 - 2 \cdot N\right)}{(1 + N)} - RV = 0$$

$$2 \cdot CE \cdot \frac{N}{(1 + N)} - CQ = 0 \qquad CE \cdot \frac{N^3 + 6\,N^2 + N}{(N + 1)^3} - CE - EI = 0 \qquad CE \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1 + N)^3} \cdot N - CI = 0$$

$$CE \cdot N^2 \cdot \frac{\left(-3 + 2 \cdot N + N^2\right)}{(1 + N)^3} - IN = 0 \qquad (N - 1) \cdot N \cdot CE \cdot \frac{\sqrt{(N + 3) \cdot (3 \cdot N + 1)}}{(1 + N)^3} - IQ = 0$$

$$\frac{1}{2} \cdot CE \cdot \frac{\left(2 \cdot N - 6 \cdot N^2 + 2 \cdot N^3 + N^4 + 1\right)}{(1 + N)^3} - IL = 0$$

$$\left[\frac{1}{2} \cdot CE \cdot (N - 1) \cdot \frac{\left[N^3 + 3 \cdot N^2 - 2 \cdot N \cdot \sqrt{(N + 3) \cdot (3 \cdot N + 1)} + 3 \cdot N + 1\right]}{(1 + N)^3}\right] - PX = 0$$

$$\frac{1}{2}\cdot CE\cdot\left(N^2+4\cdot N+1\right)\cdot\frac{(N-1)^2}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]}-AL=0$$

$$CE\cdot(N-1)\cdot\frac{\left[N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}-3\cdot N-1\right]}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]}-AE=0$$

$$-CE\cdot N\cdot\frac{\left[-N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+6\cdot N+1-\sqrt{(N+3)\cdot(3\cdot N+1)}+N^2\right]}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]}-AC=0$$

$$\frac{CE\cdot(N-1)^2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot\left(N^2+4\cdot N+1\right)}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]\cdot(1+N)^3}-AI=0$$

$$\frac{1}{2}\cdot CE\cdot(N-1)\cdot\sqrt{2}\cdot\sqrt{\frac{(1+N)^3}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]}}-AX=0$$

$$CE\cdot(N-1)\cdot\sqrt{2}\cdot\sqrt{\frac{(1+N)^3}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]}}\cdot N\cdot\frac{\sqrt{(N+3)\cdot(3\cdot N+1)}}{(1+N)^3}-AQ=0$$

$$\sqrt{\frac{\left[2\cdot(1+N)^3\right]}{\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\ \ldots\right.}}\cdot CE\cdot(N-1)\cdot\frac{\left[\left(N^3+3\cdot N^2\right)-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\ \ldots\right.}{\left.+3\cdot N+1\right]}\ \ldots=0$$

$$\left.+3\cdot N+1\right]$$

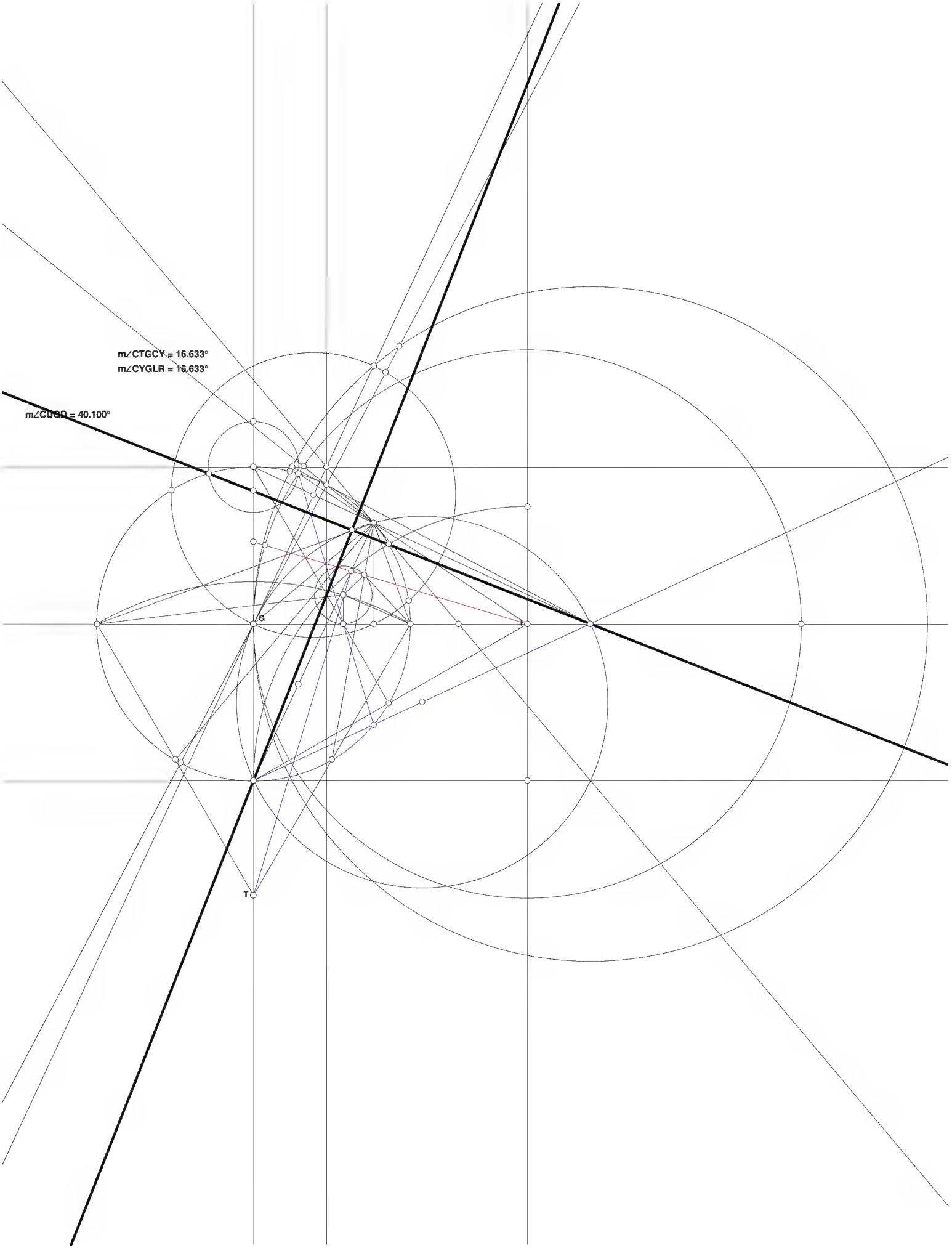
$$+-QX$$

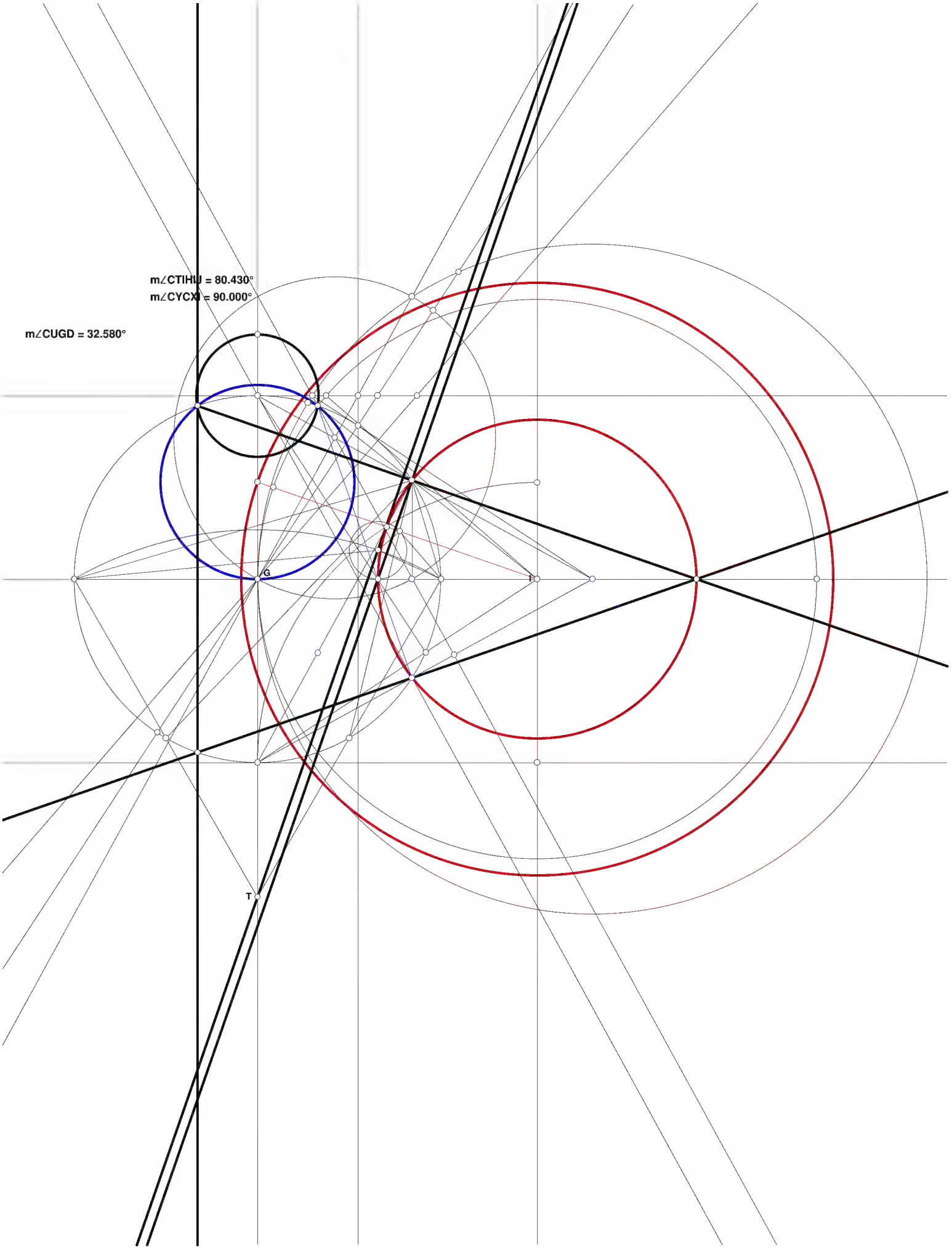
$$\frac{CE}{2}\cdot\sqrt{2}\cdot\sqrt{\left(1+N^2\right)}-CX=0 \qquad \frac{1}{4}\cdot CE\cdot(1+N)^2\cdot\frac{\sqrt{2}}{\sqrt{1+N^2}}-CS=0 \qquad \frac{1}{4}\cdot\sqrt{2}\cdot CE\cdot\frac{(N-1)^2}{\sqrt{1+N^2}}-SX=0$$

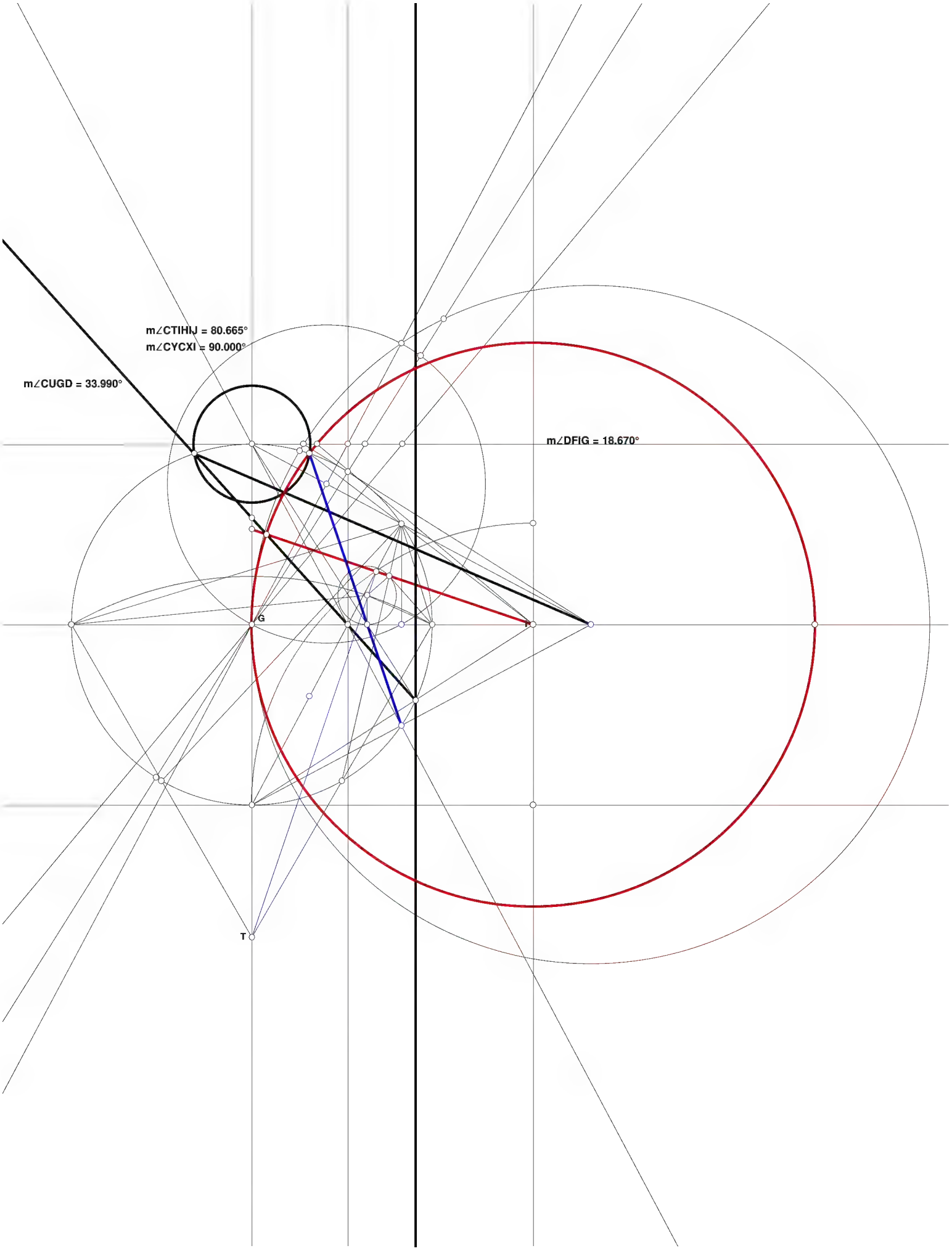
$$\frac{\sqrt{2}}{\sqrt{1+N^2}}\cdot CE\cdot N-CO=0 \qquad CE\cdot N\cdot\frac{(N-1)}{\left(1+N^2\right)}-GO=0 \qquad CE\cdot\frac{N^2+N}{\left(1+N^2\right)}-CG=0 \qquad CE\cdot\frac{(N-1)}{\left(1+N^2\right)}-EG=0$$

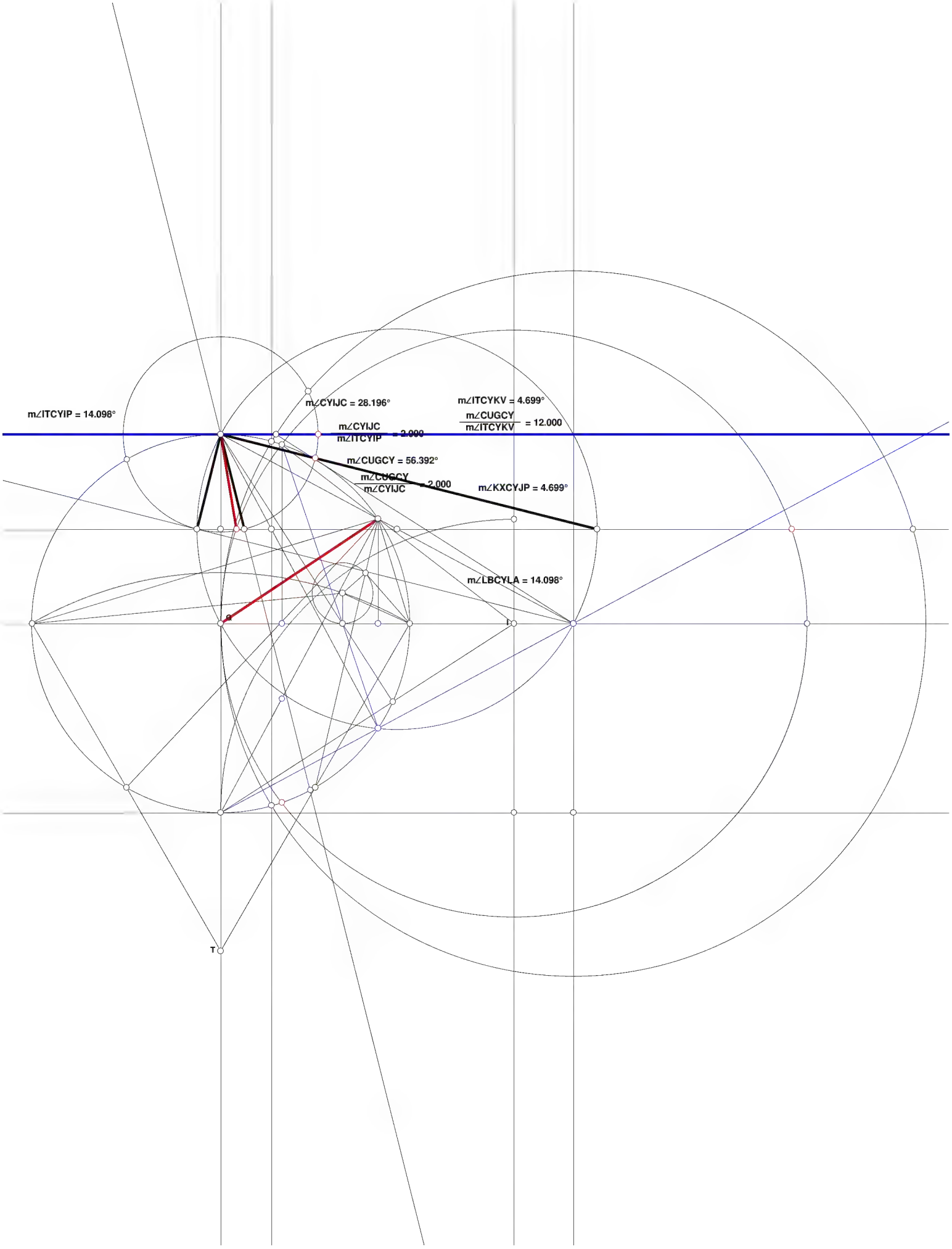
$$CE\cdot(N-1)^2\cdot N\cdot\frac{\left[N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}-2\cdot N+\sqrt{(N+3)\cdot(3\cdot N+1)}\right]}{\left[\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]\cdot\left(1+N^2\right)\right]}-AG=0$$

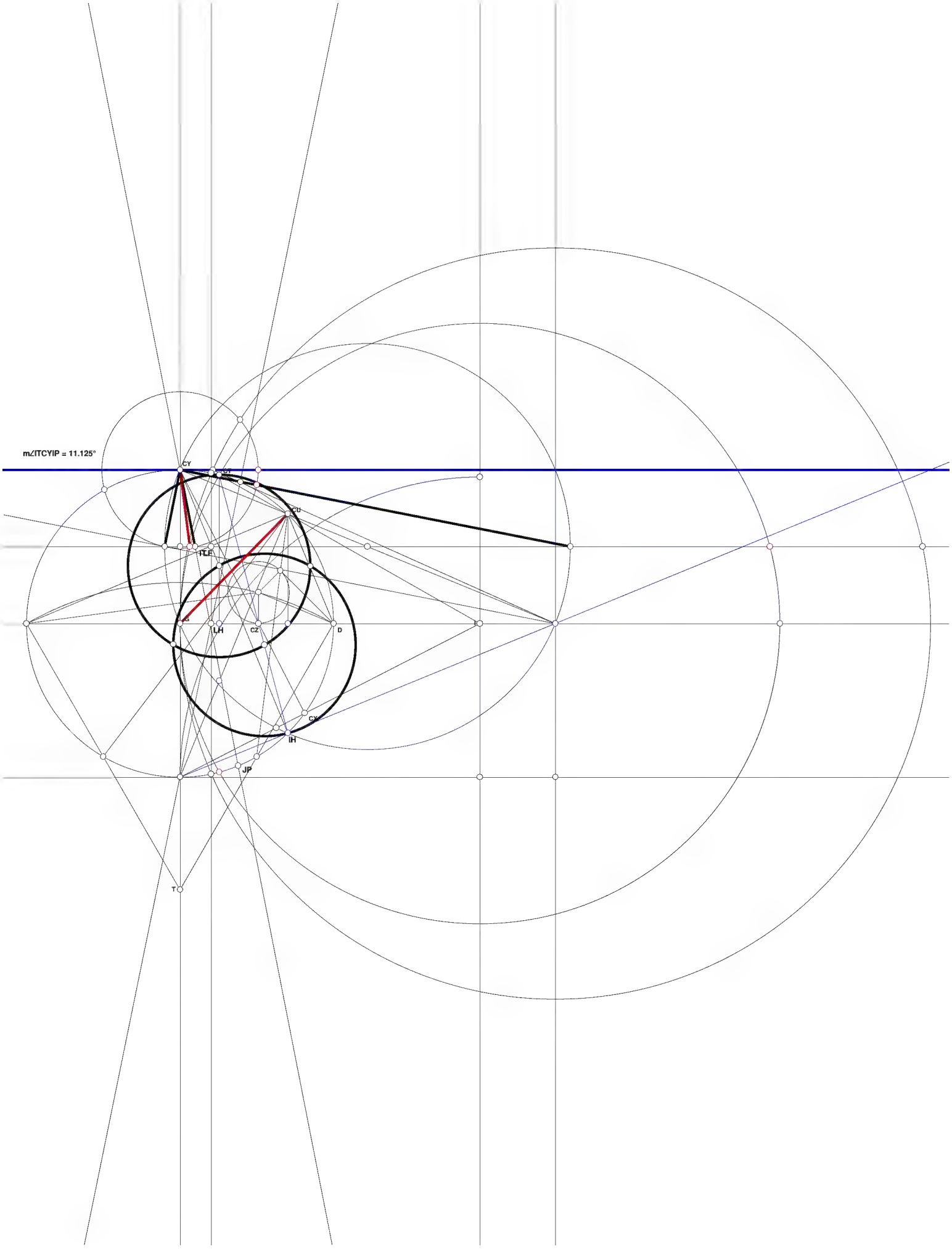
$$\frac{CE\cdot(N-1)}{2}\cdot\sqrt{\frac{\left[\begin{array}{l}\left[2\cdot N^4+14\cdot N^3-N^3\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+32\cdot N^2\right]-7\cdot N^2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\ \ldots\\ +-7\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+14\cdot N+2-\sqrt{(N+3)\cdot(3\cdot N+1)}\end{array}\right]}{\left[(1+N)\cdot\left[N^3+3\cdot N^2-2\cdot N\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}+3\cdot N+1\right]\right]}}-XZ=0$$

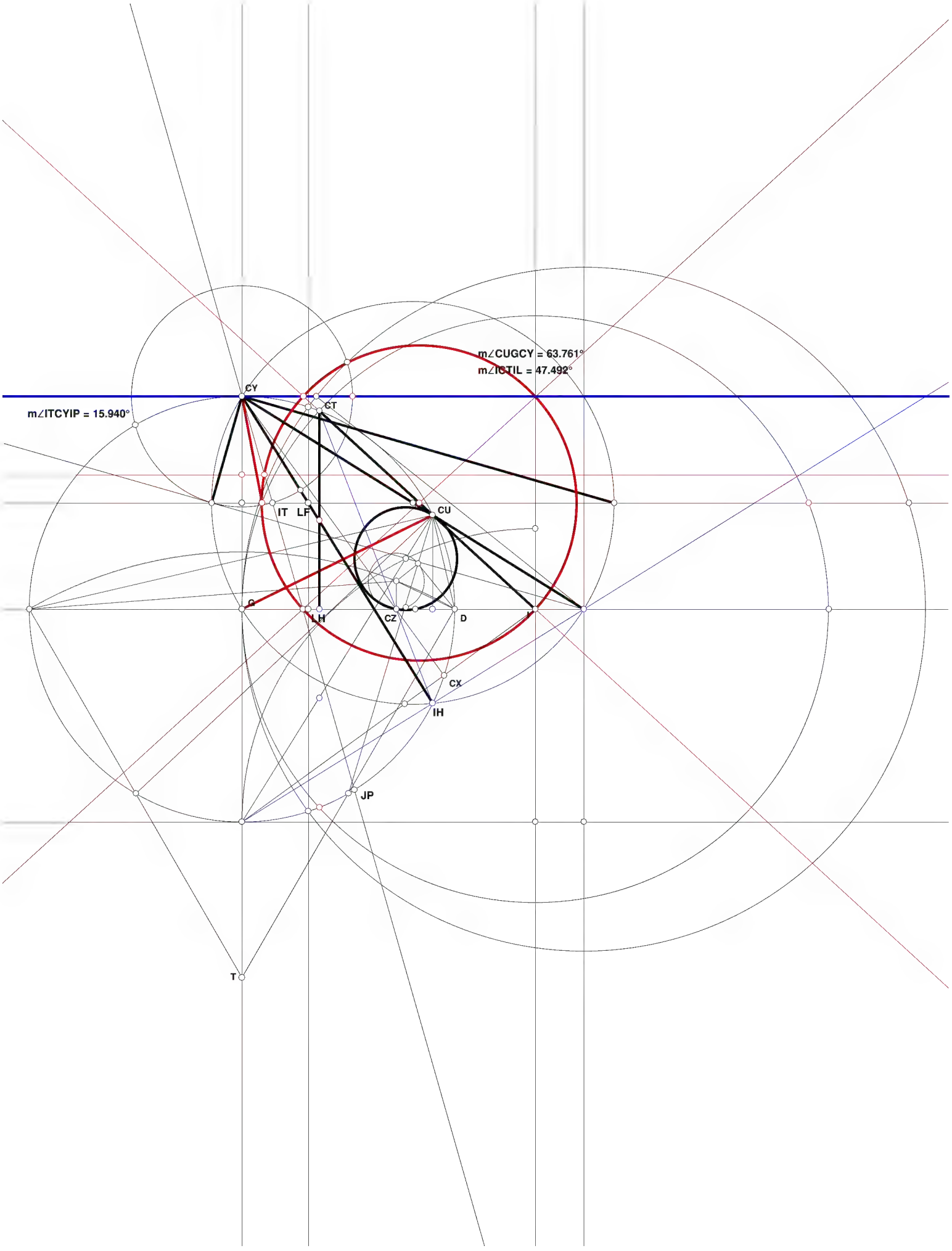

m∠CTGCY = 16.633°
m∠CYGLR = 16.633°
m∠CUGD = 40.100°
G
T

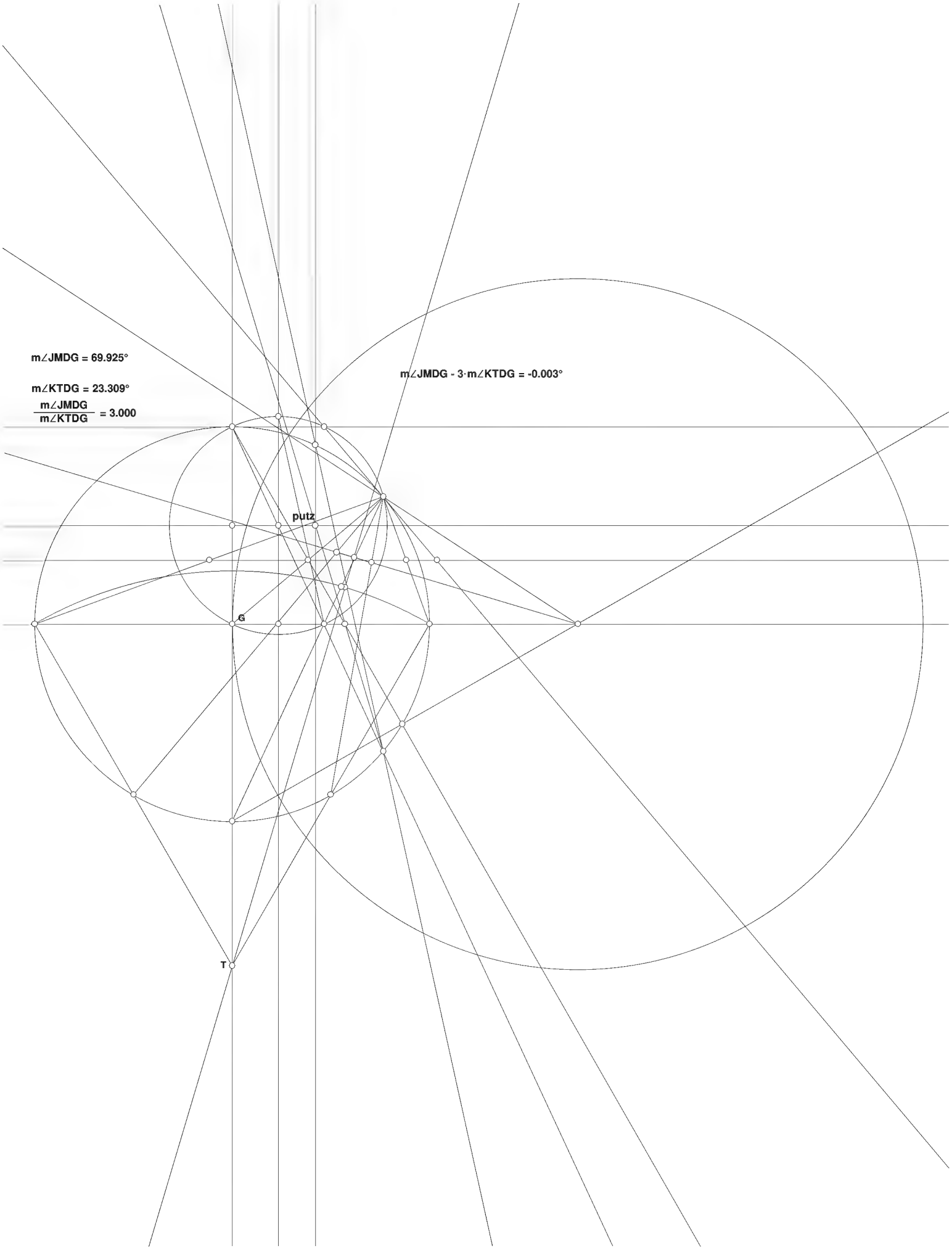

m∠CTIHIJ = 80.430°
m∠CYCXI = 90.000°
m∠CUGD = 32.580°
G
I
T

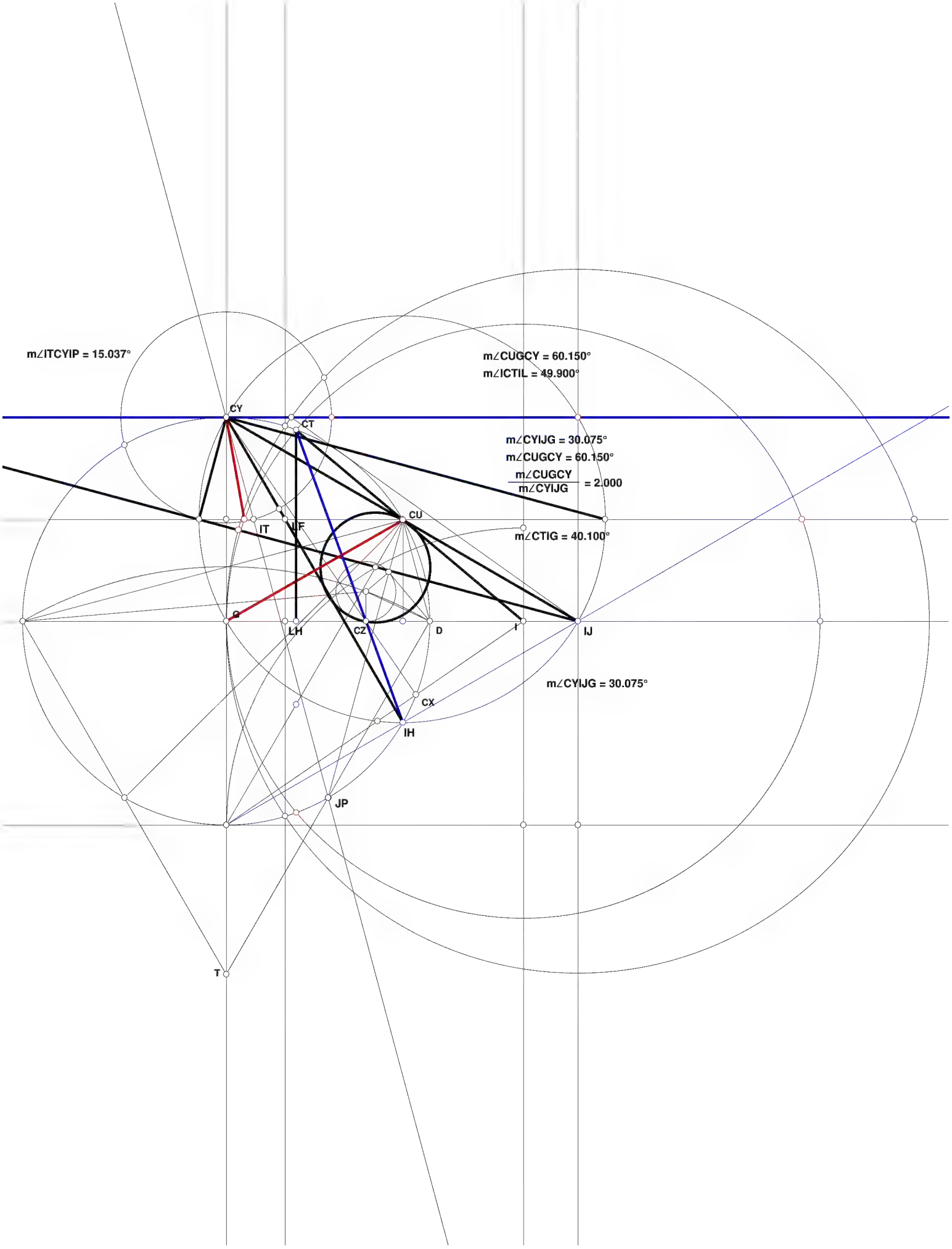

m∠CTIHIJ = 80.665°
m∠CYCXI = 90.000°
m∠CUGD = 33.990°
m∠DFIG = 18.670°
G
T

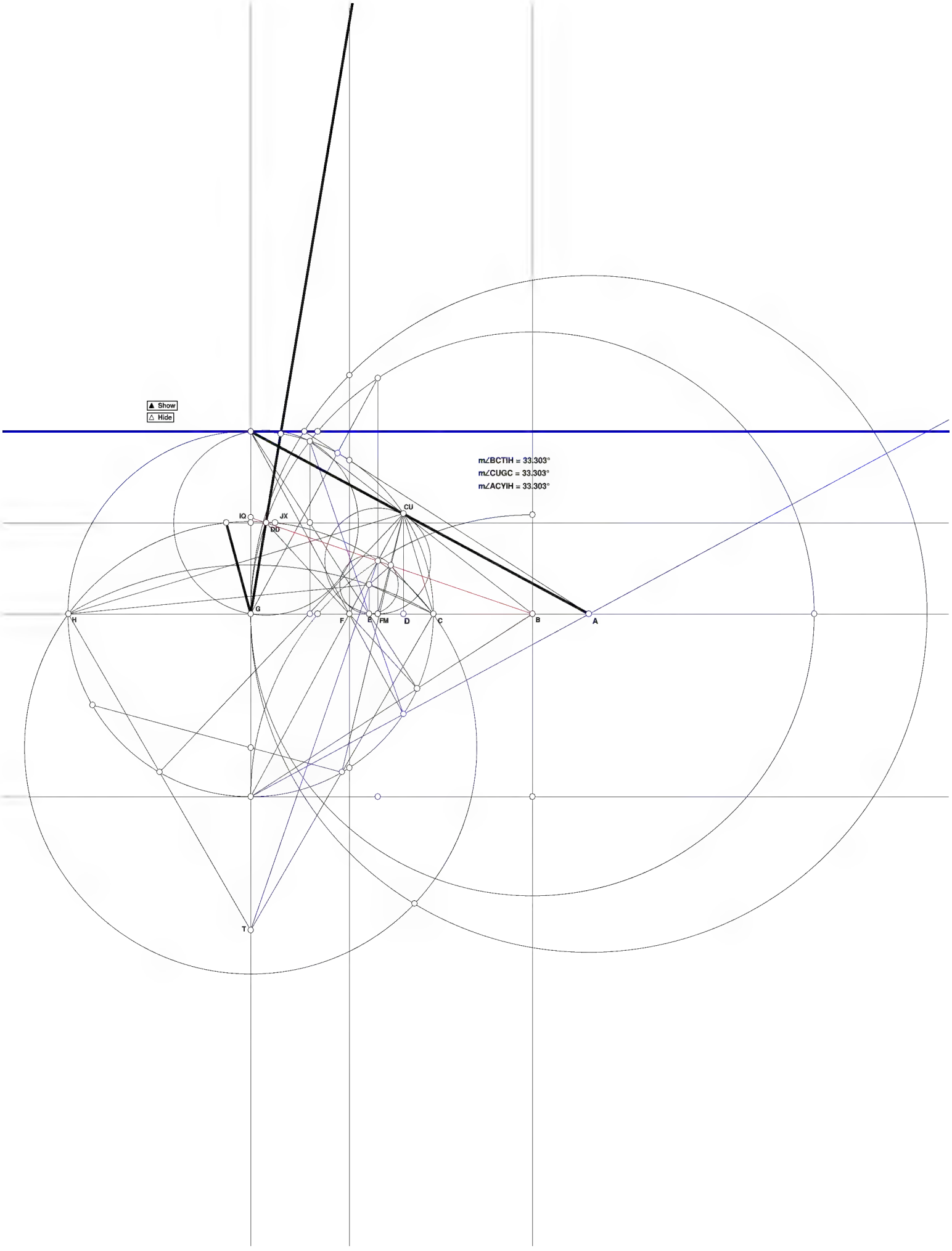

m∠ITCYIP = 14.098°
m∠CYIJC = 28.196°
m∠ITCYKV = 4.699°
m∠CUGCY / m∠ITCYKV = 12.000
m∠CYIJC / m∠ITCYIP = 2.000
m∠CUGCY = 56.392°
m∠CUGCY / m∠CYIJC = 2.000
m∠KXCYJP = 4.699°
m∠LBCYLA = 14.098°
C
I
T

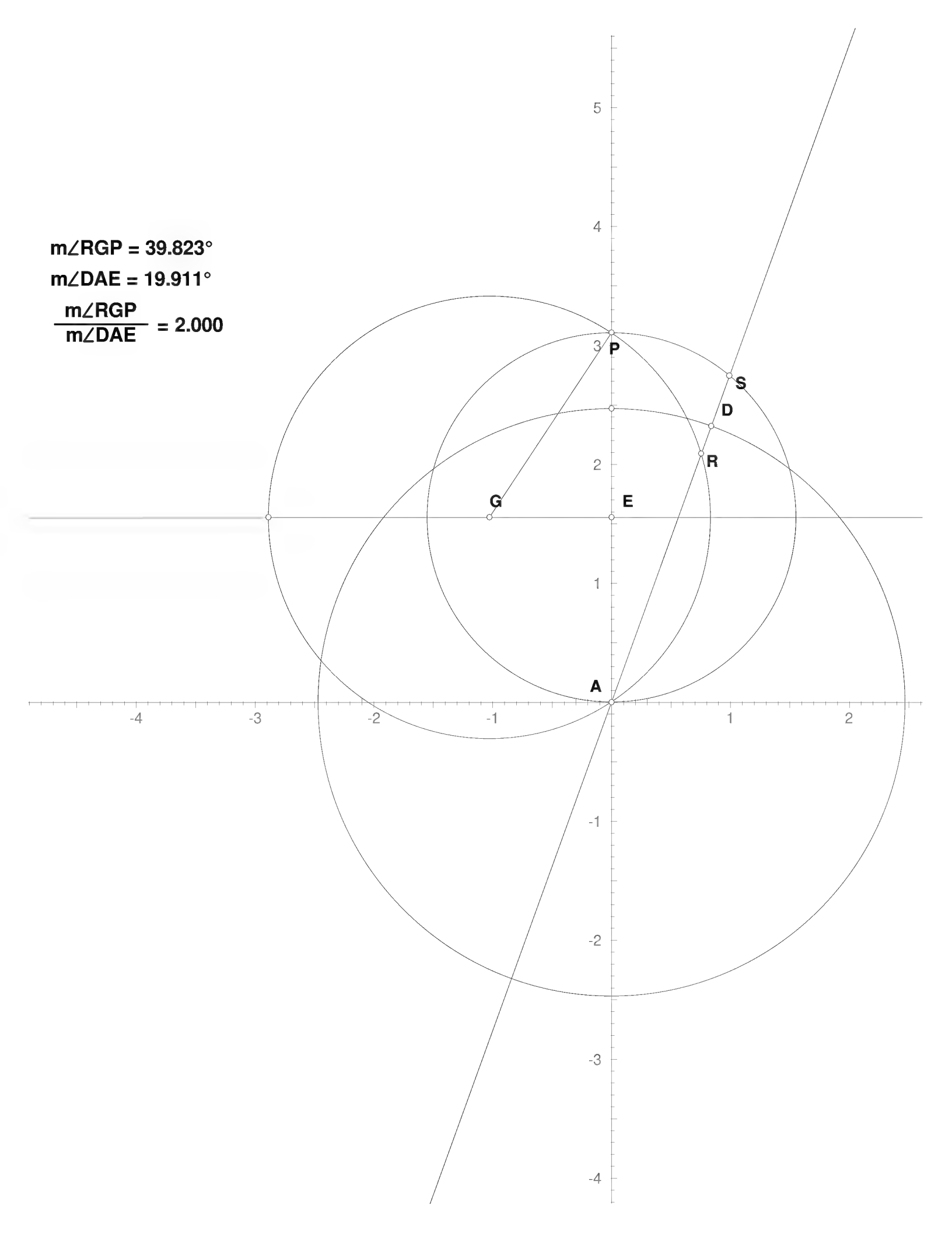

m∠ITCYIP = 11.125°
CY
CT
CU
ITLF
LH
CZ
D
CX
IH
JP
T

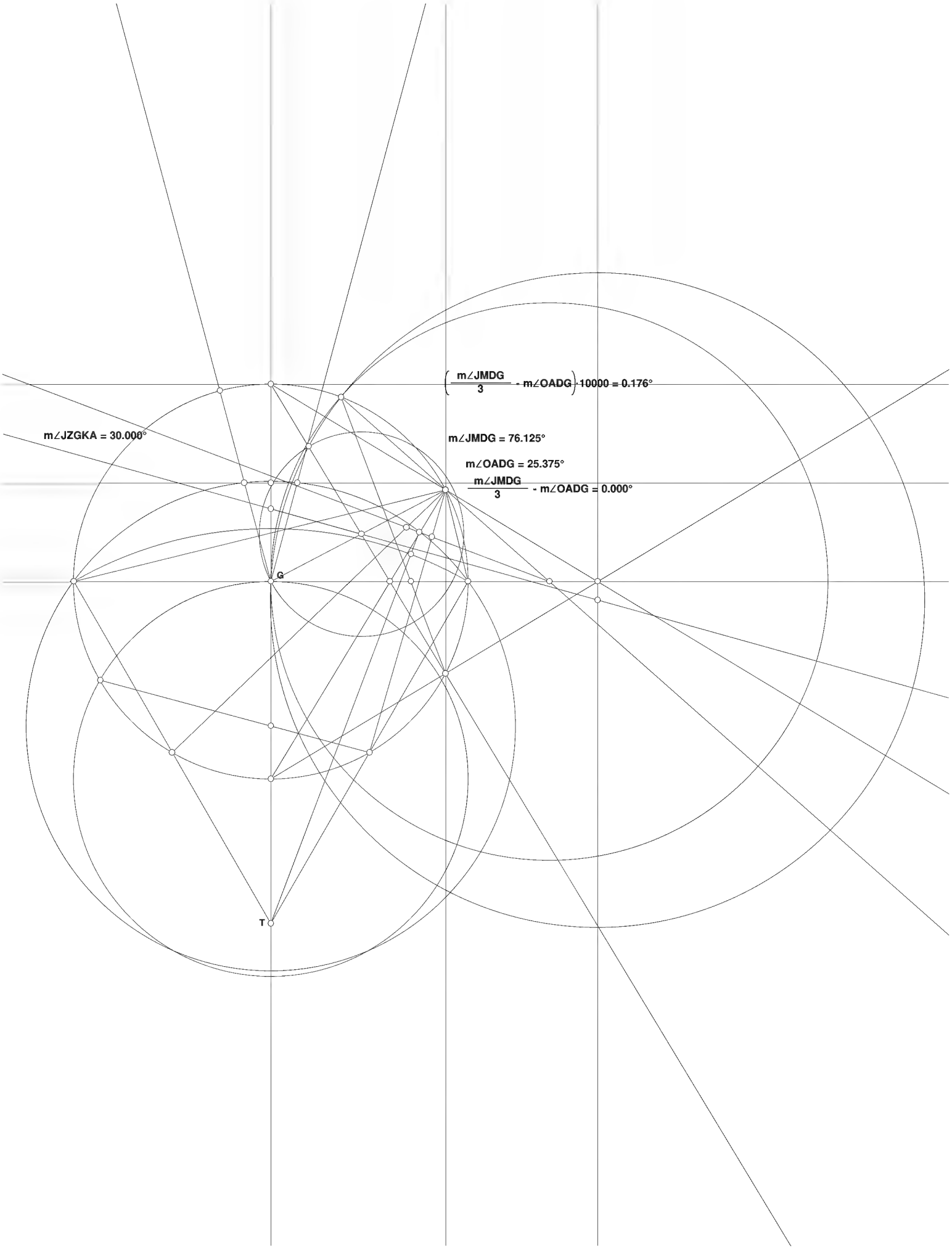

m∠CUGCY = 63.761°
m∠ICTIL = 47.492°
m∠ITCYIP = 15.940°
CY
CT
IT
LF
CU
G
LH
CZ
D
I
CX
IH
JP
T

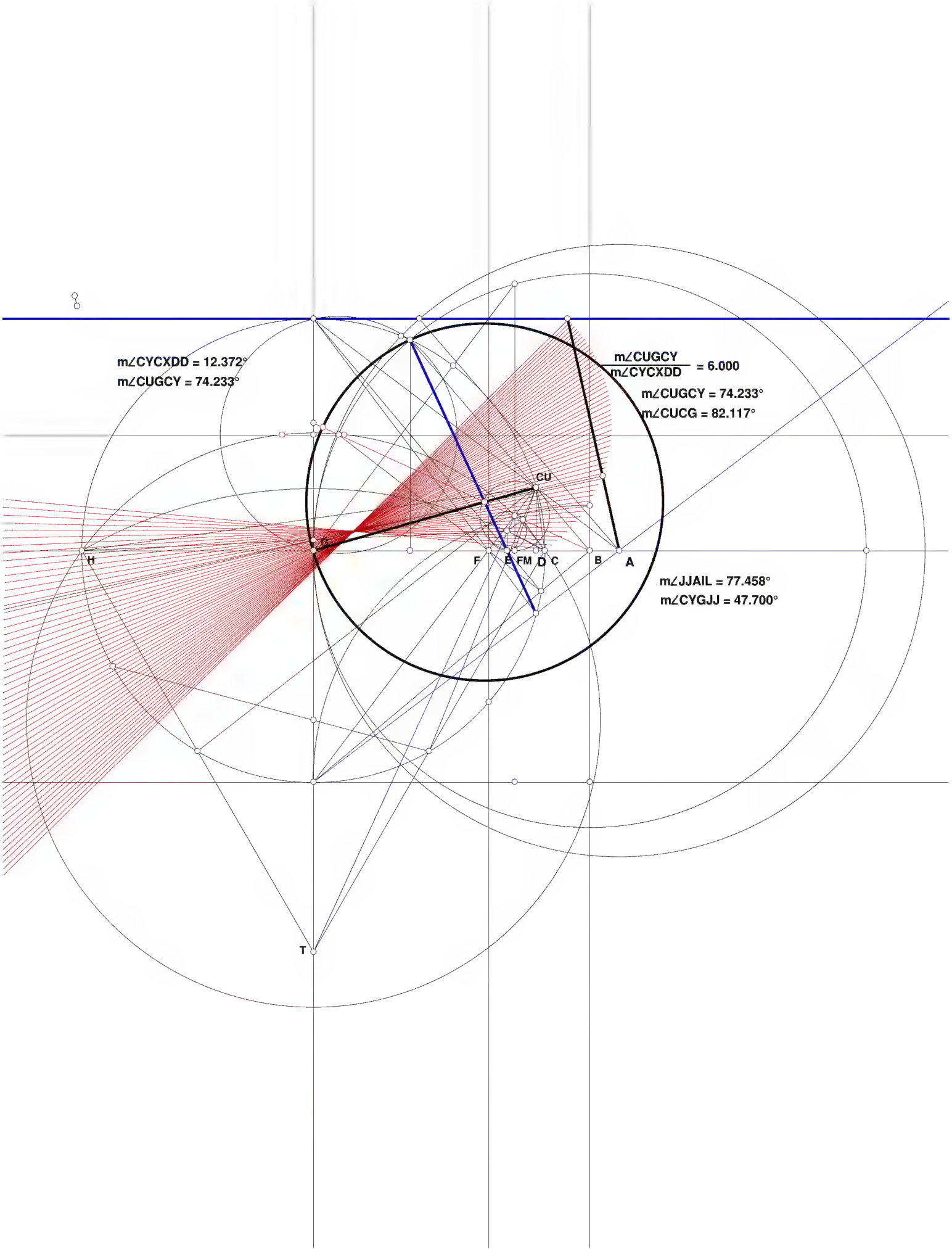

m∠JMDG = 69.925°
m∠KTDG = 23.309°
m∠JMDG / m∠KTDG = 3.000
m∠JMDG - 3·m∠KTDG = -0.003°
putz
G
T

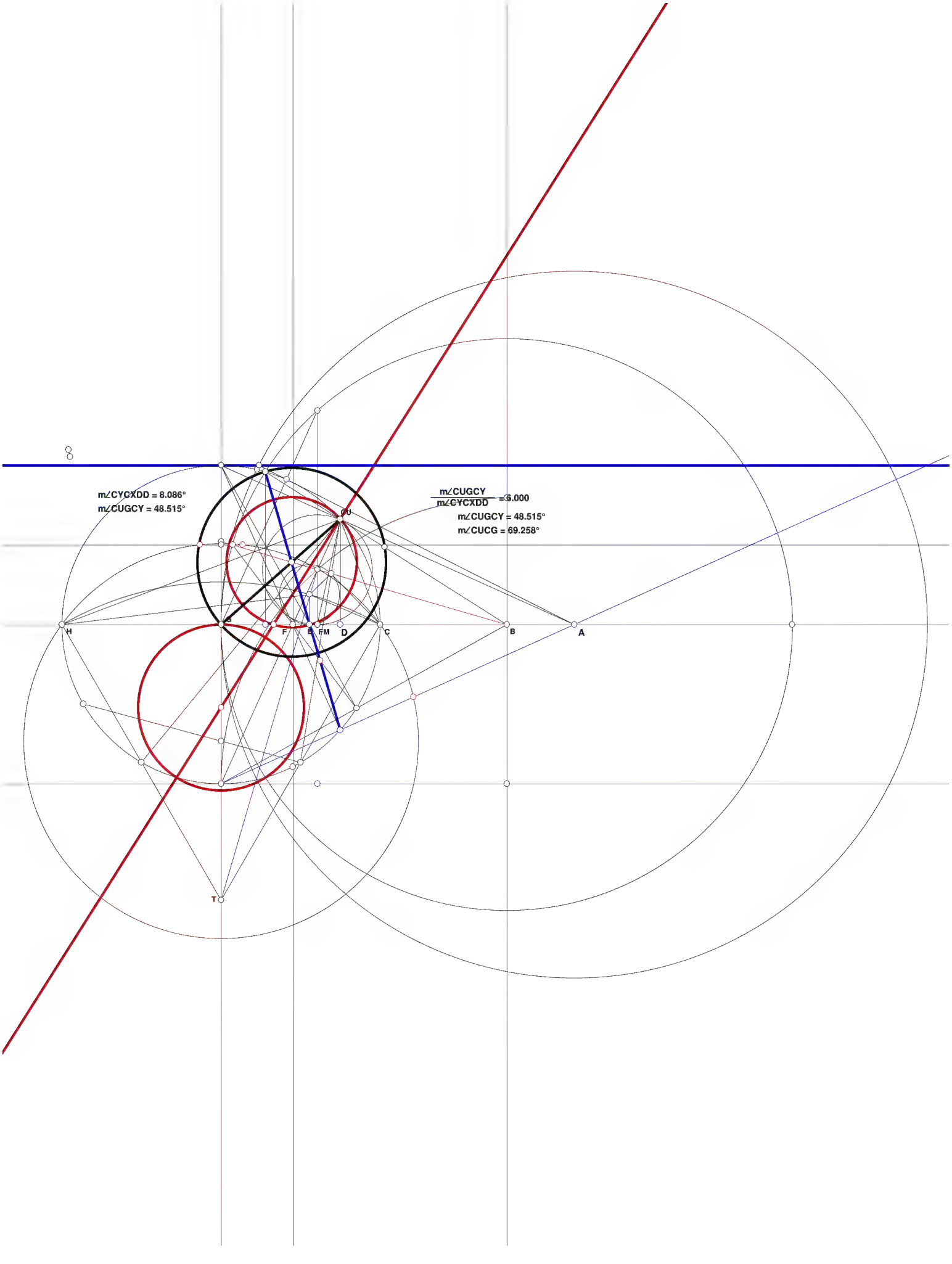

m∠ITCYIP = 15.037°
m∠CUGCY = 60.150°
m∠ICTIL = 49.900°
CY
CT
m∠CYIJG = 30.075°
m∠CUGCY = 60.150°
m∠CUGCY / m∠CYIJG = 2.000
CU
IT
IF
m∠CTIG = 40.100°
G
LH
CZ
D
I
IJ
m∠CYIJG = 30.075°
CX
IH
JP
T

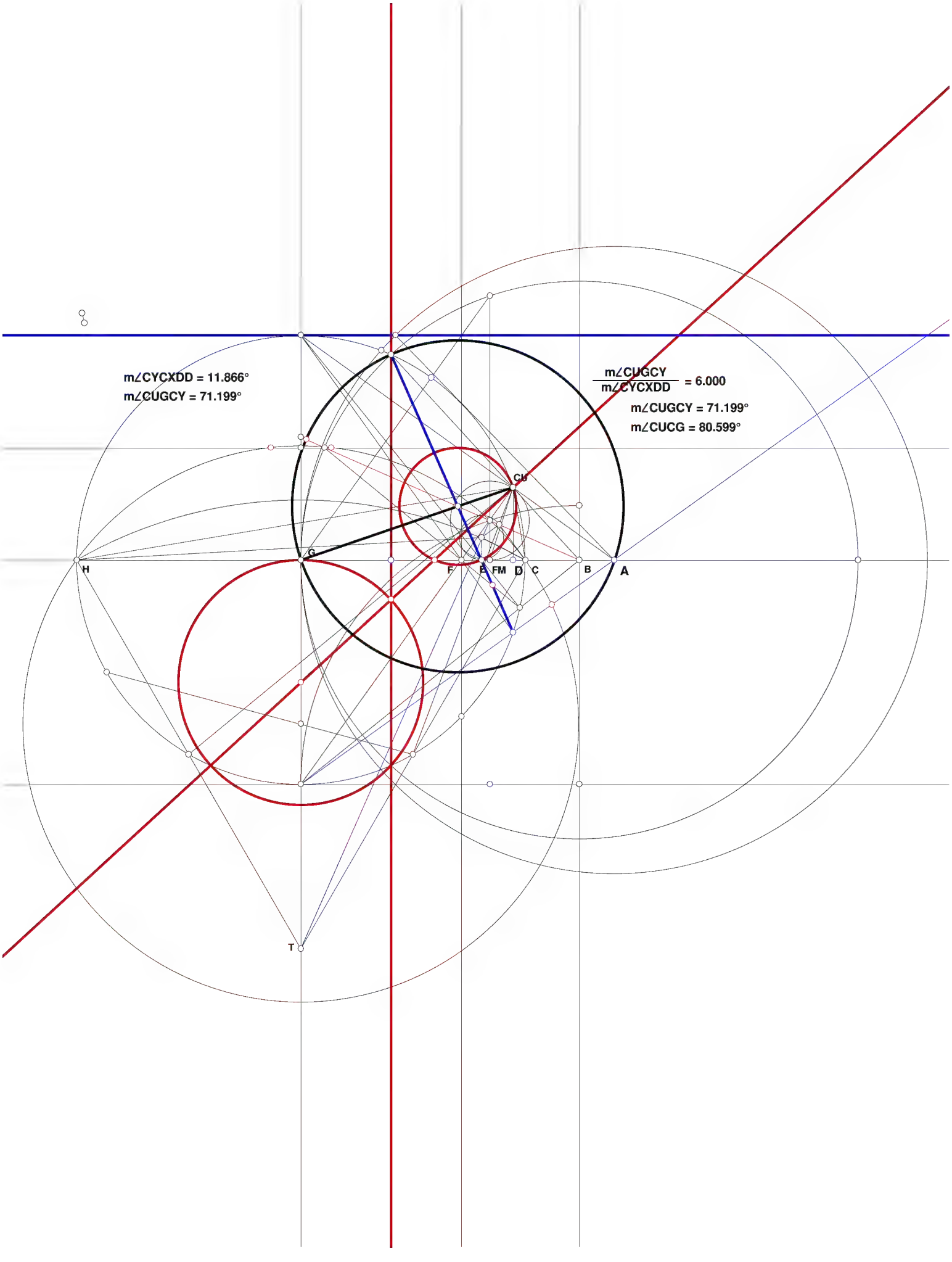

▲ Show
△ Hide
m∠BCTIH = 33.303°
m∠CUGC = 33.303°
m∠ACYIH = 33.303°
IQ
JX
DD
CU
G
H
F
E
FM
D
C
B
A
T

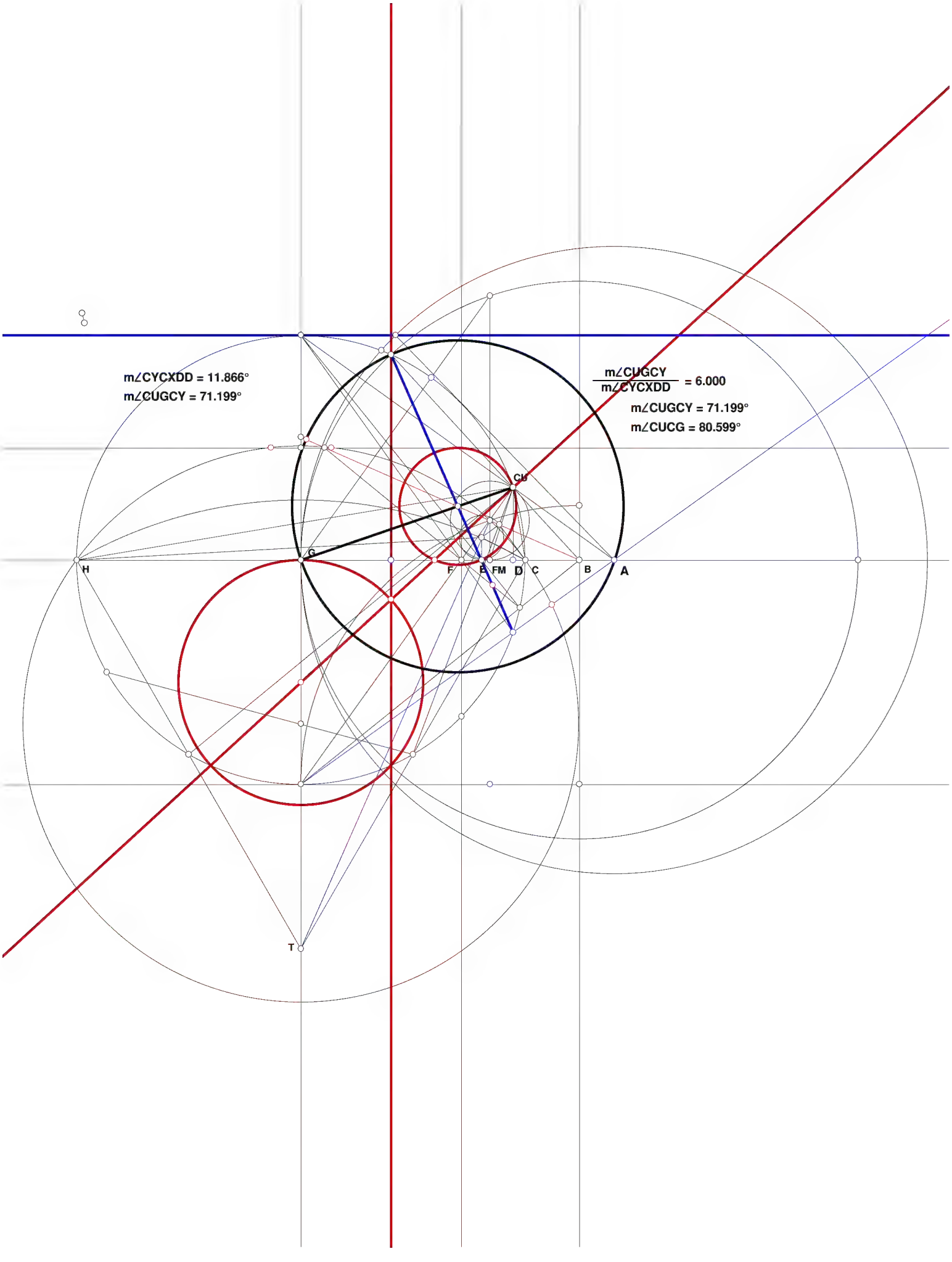

m∠RGP = 39.823°
m∠DAE = 19.911°
m∠RGP / m∠DAE = 2.000
P
S
D
R
G
E
A
5
4
3
2
1
-1
-2
-3
-4
-4
-3
-2
-1
1
2

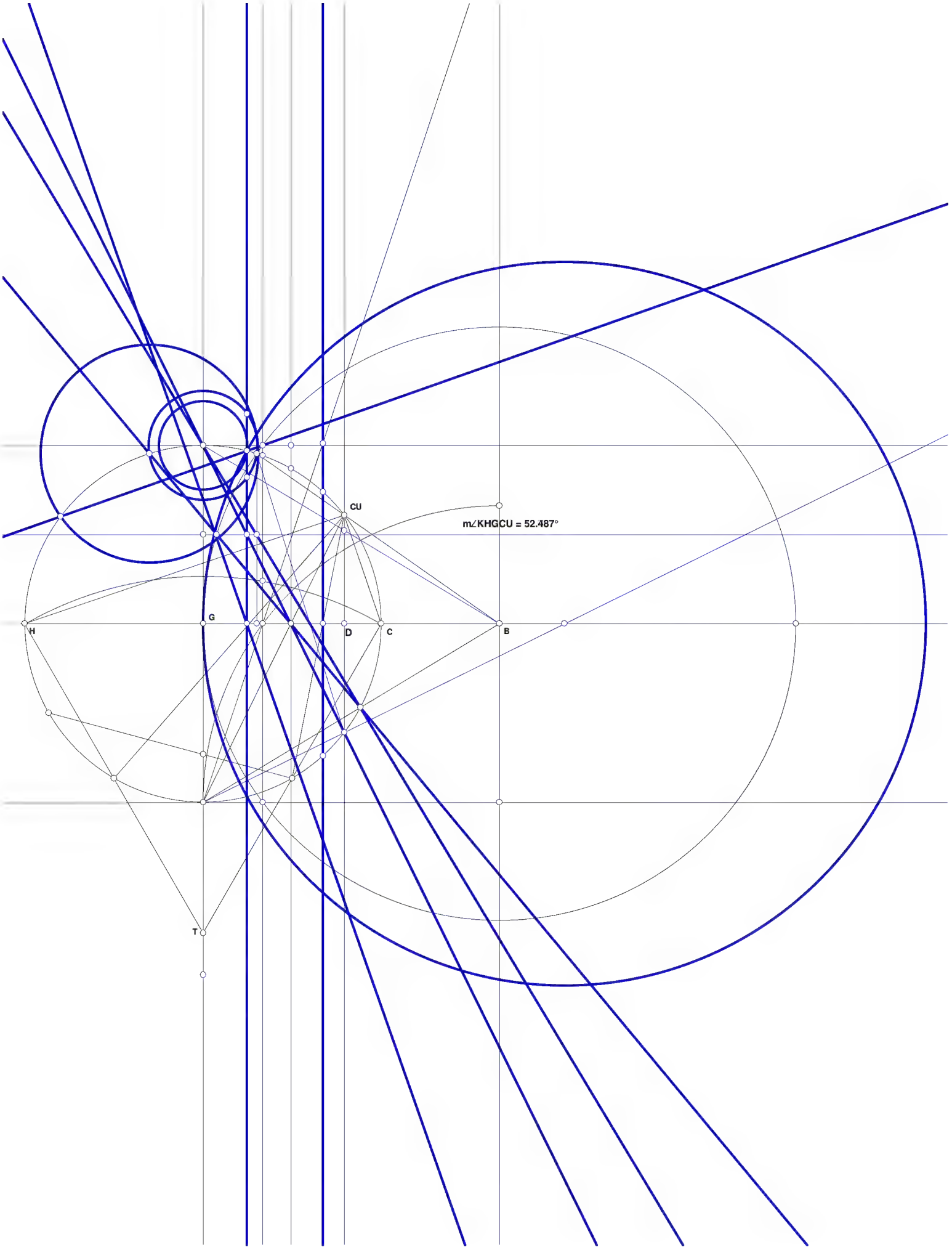

$\left(\frac{m\angle JMDG}{3} - m\angle OADG\right) 10000 = 0.176°$
$m\angle JZGKA = 30.000°$
$m\angle JMDG = 76.125°$
$m\angle OADG = 25.375°$
$\frac{m\angle JMDG}{3} - m\angle OADG = 0.000°$
G
T


m∠CYCXDD = 12.372°
m∠CUGCY = 74.233°
m∠CUGCY / m∠CYCXDD = 6.000
m∠CUGCY = 74.233°
m∠CUCG = 82.117°
m∠JJAIL = 77.458°
m∠CYGJJ = 47.700°
CU
H
F
E
FM
D
C
B
A
T

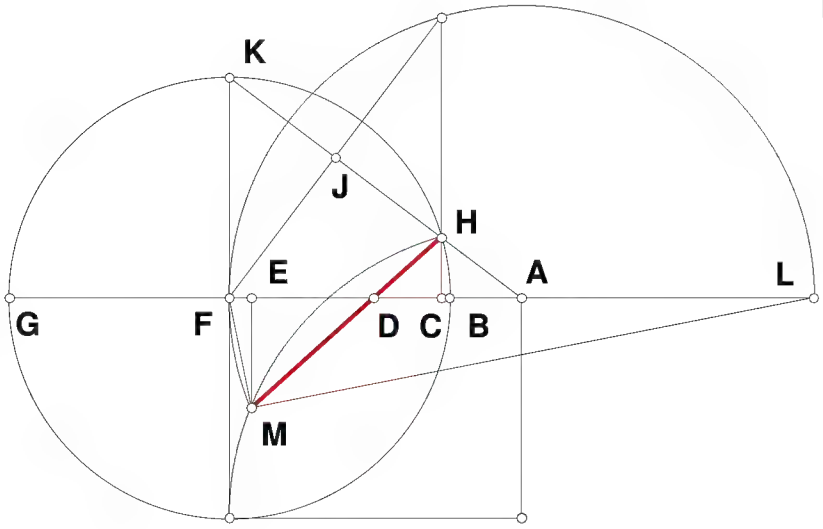

m∠CYCXDD = 8.086°
m∠CUGCY = 48.515°
m∠CUGCY / m∠CYCXDD = 6.000
m∠CUGCY = 48.515°
m∠CUCG = 69.258°
U
H
F
B
FM
D
C
B
A
T


m∠CYCXDD = 11.866°
m∠CUGCY = 71.199°
m∠CUGCY / m∠CYCXDD = 6.000
m∠CUGCY = 71.199°
m∠CUCG = 80.599°
CU
G
H
F
E
FM
D
C
B
A
T


m∠CYCXDD = 11.866°
m∠CUGCY = 71.199°
m∠CUGCY / m∠CYCXDD = 6.000
m∠CUGCY = 71.199°
m∠CUCG = 80.599°
CU
G
H
F
E
FM
D
C
B
A
T


CU
m∠KHGCU = 52.487°
H
G
D
C
B
T

Segment DF And HM 052201



Given AB and AG, what is HM and DF?

$N := 7.111 \qquad AB := .375$

$AG := AB \cdot N \qquad BG := AG - AB$

$BF := \frac{BG}{2} \qquad FK := BF$

$AF := AB + BF$

$AK := \sqrt{AF^2 + FK^2}$

$AJ := \frac{AF^2}{AK} \qquad JK := AK - AJ$

$HJ := JK \qquad AH := AK - (JK + HJ) \qquad AC := \frac{AF \cdot AH}{AK} \qquad EM := \frac{BF}{2} \qquad FL := 2 \cdot AF \qquad EF := \frac{FL}{2} - \frac{\sqrt{-4\,EM^2 + FL^2}}{2}$

$AE := AF - EF \qquad CE := AE - AC \qquad CH := \frac{FK \cdot AH}{AK} \qquad HM := \sqrt{(EM + CH)^2 + CE^2} \qquad DE := \frac{CE \cdot EM}{EM + CH}$

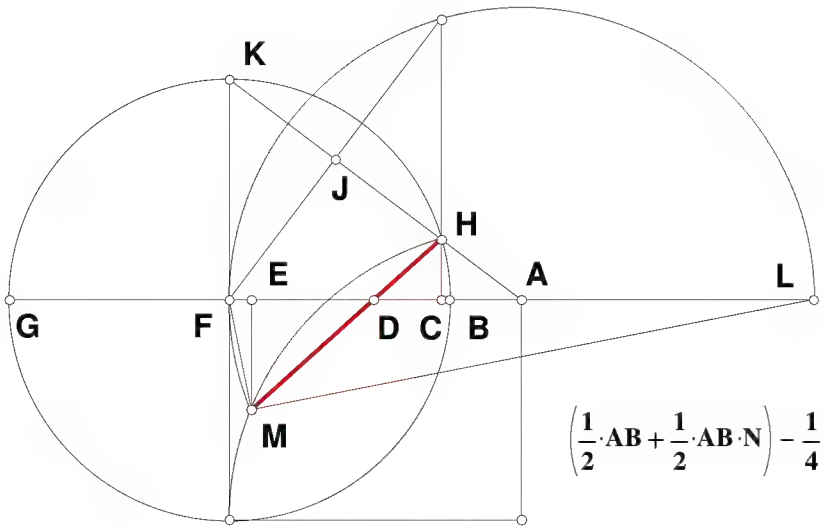
$DF := DE + EF$

Some Algebraic Names:

$AB \cdot N - AG = 0 \qquad AB \cdot N - AB - BG = 0 \qquad \frac{1}{2} \cdot AB \cdot N - \frac{1}{2} \cdot AB - BF = 0 \qquad \frac{1}{2} \cdot AB \cdot N - \frac{1}{2} \cdot AB - FK = 0$

$\frac{1}{2} \cdot AB + \frac{1}{2} \cdot AB \cdot N - AF = 0 \qquad \frac{1}{2} \cdot AB \cdot \sqrt{2} \cdot \sqrt{1 + N^2} - AK = 0 \qquad \frac{1}{4} \cdot AB \cdot (1 + N)^2 \cdot \frac{\sqrt{2}}{\sqrt{1 + N^2}} - AJ = 0$

$\frac{1}{4} \cdot \sqrt{2} \cdot AB \cdot \frac{(1 + N^2 - 2 \cdot N)}{\sqrt{1 + N^2}} - JK = 0 \qquad AB \cdot \sqrt{2} \cdot \frac{N}{\sqrt{1 + N^2}} - AH = 0 \qquad AB \cdot (1 + N) \cdot \frac{N}{1 + N^2} - AC = 0$



$$\frac{1}{4}\cdot AB\cdot N-\frac{1}{4}\cdot AB-EM=0$$

$$AB+AB\cdot N-FL=0$$

$$\left(\frac{1}{2}\cdot AB+\frac{1}{2}\cdot AB\cdot N\right)-\frac{1}{4}\cdot AB\cdot\sqrt{3\cdot N^2+10\cdot N+3}-EF=0$$

$$\frac{1}{4}\cdot AB\cdot\sqrt{3\cdot N^2+10\cdot N+3}-AE=0$$

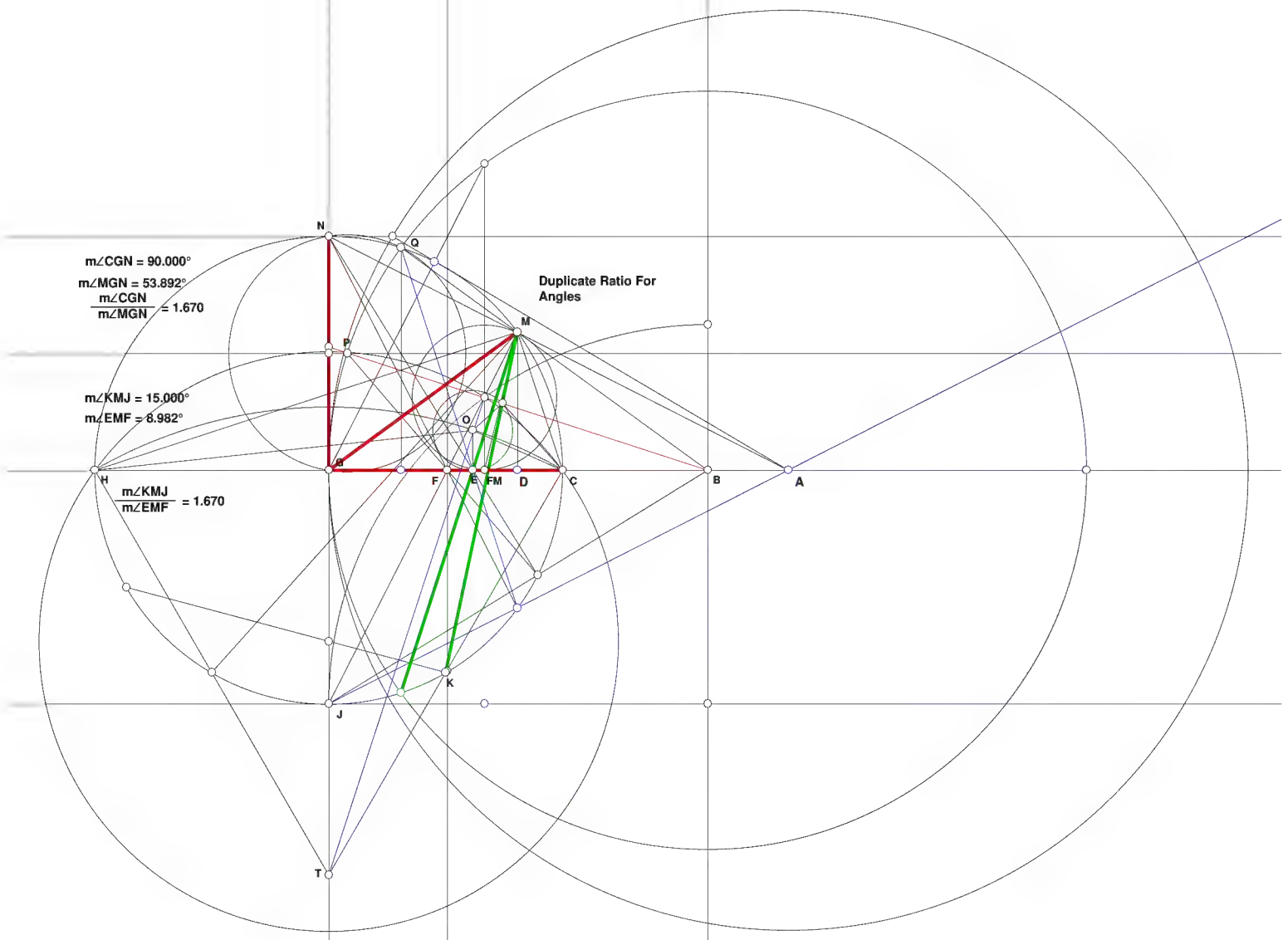
$$\frac{1}{4}\cdot AB\cdot\frac{\left(\sqrt{3\cdot N^2+10\cdot N+3}+\sqrt{3\cdot N^2+10\cdot N+3}\cdot N^2-4\cdot N-4\cdot N^2\right)}{\left(1+N^2\right)}-CE=0$$

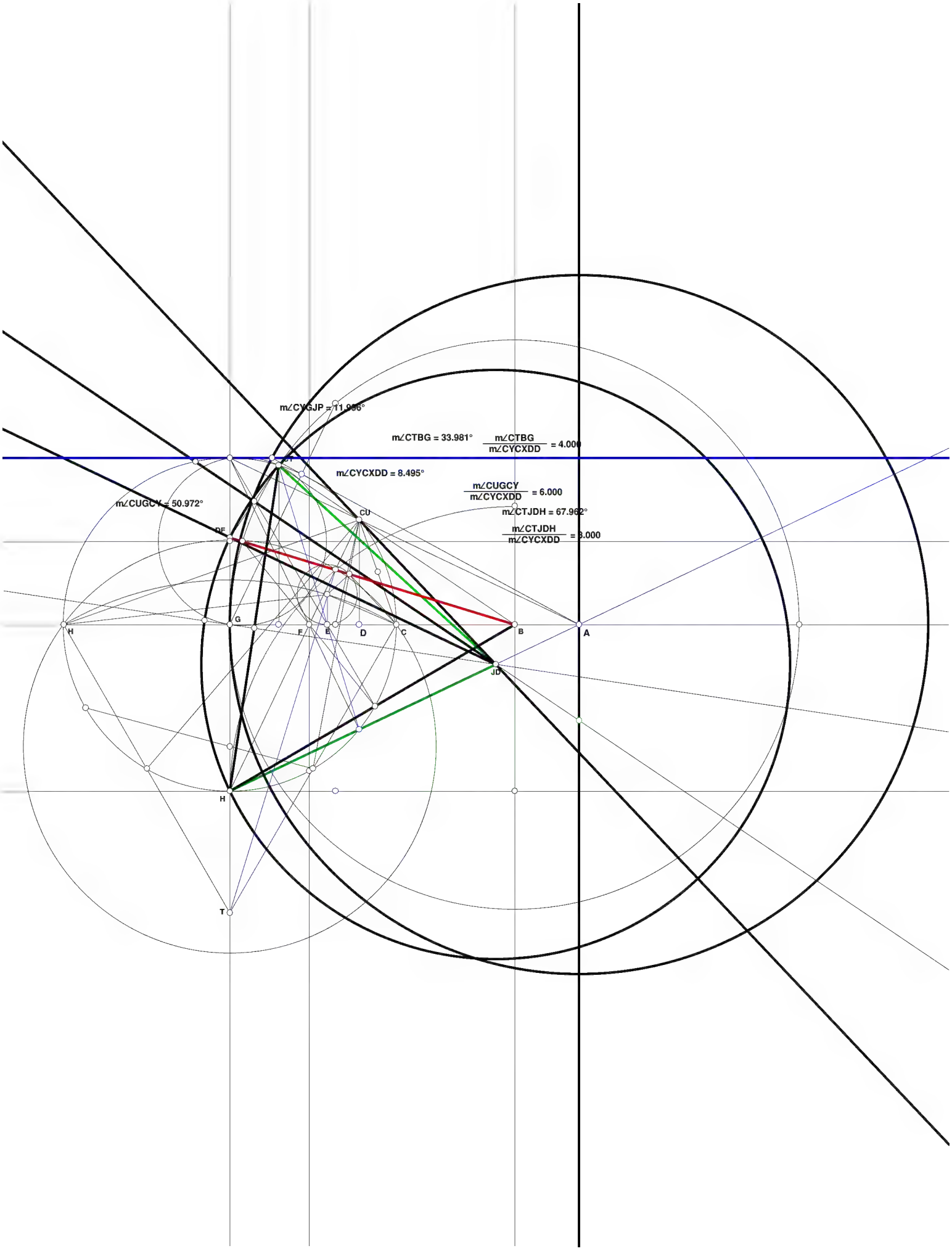
$$(N-1)\cdot AB\cdot\frac{N}{\left(1+N^2\right)}-CH=0$$

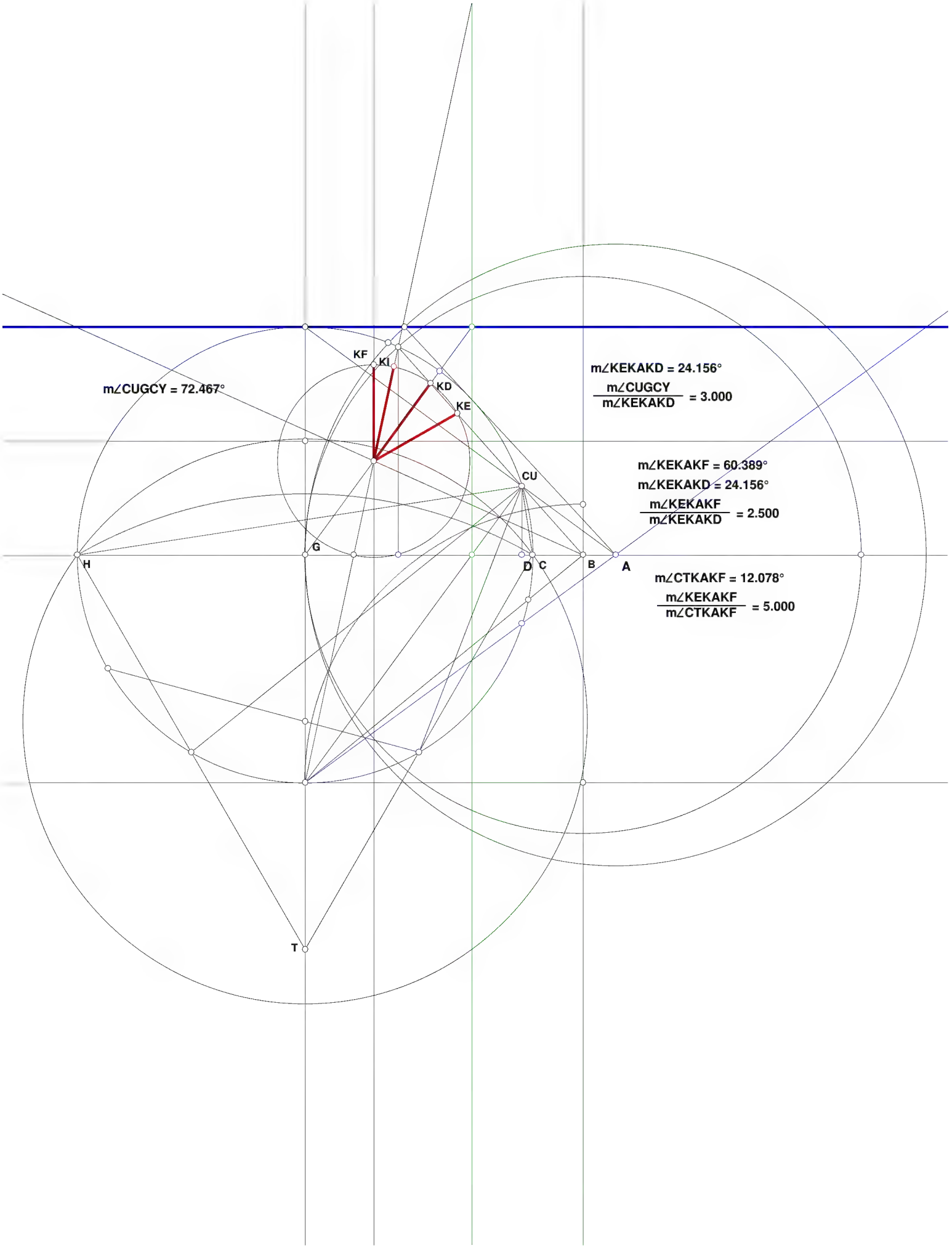
$$\frac{1}{2}\cdot AB\cdot\sqrt{(1+N)\cdot\frac{\left[N^3+3\cdot N^2-2\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}\cdot N+3\cdot N+1\right]}{\left(1+N^2\right)}}-HM=0$$

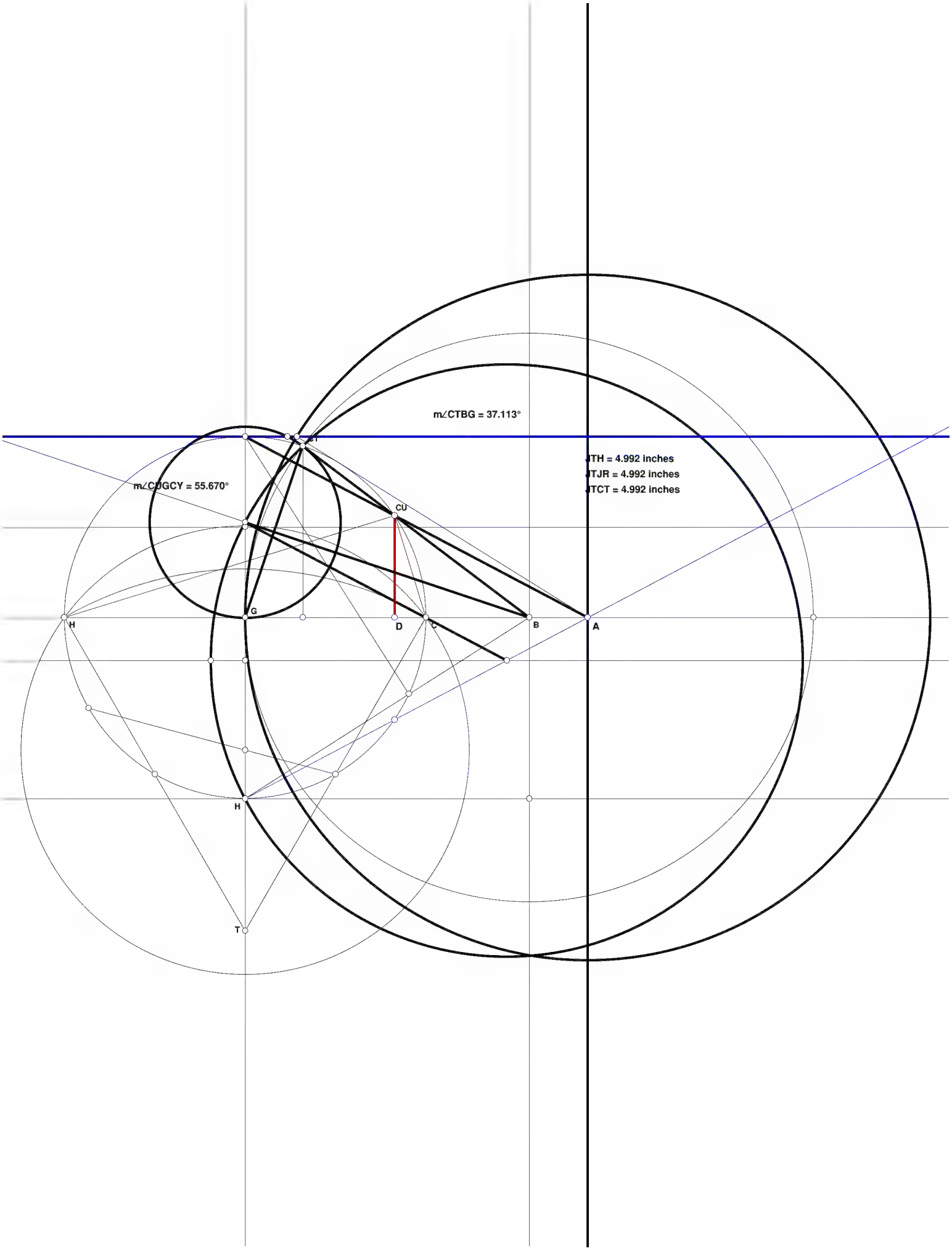
$$\frac{1}{4}\cdot\left(\sqrt{3\cdot N^2+10\cdot N+3}+\sqrt{3\cdot N^2+10\cdot N+3}\cdot N^2-4\cdot N-4\cdot N^2\right)\cdot\frac{AB}{\left(N^2+4\cdot N+1\right)}-DE=0$$

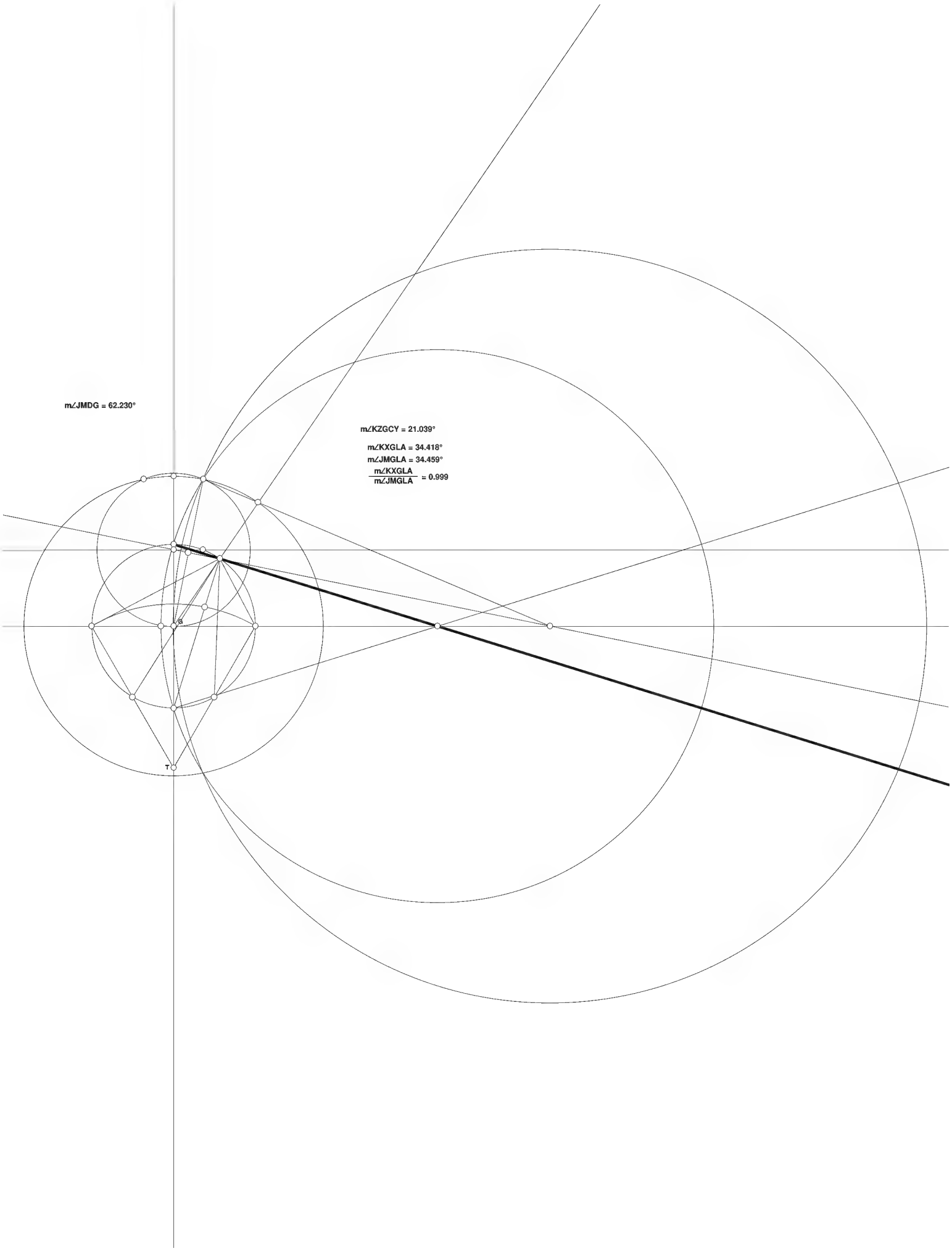
$$\frac{1}{2}\cdot AB\cdot\frac{\left(3\cdot N+3\cdot N^2+1+N^3-2\cdot\sqrt{3\cdot N^2+10\cdot N+3}\cdot N\right)}{\left(N^2+4\cdot N+1\right)}-DF=0$$

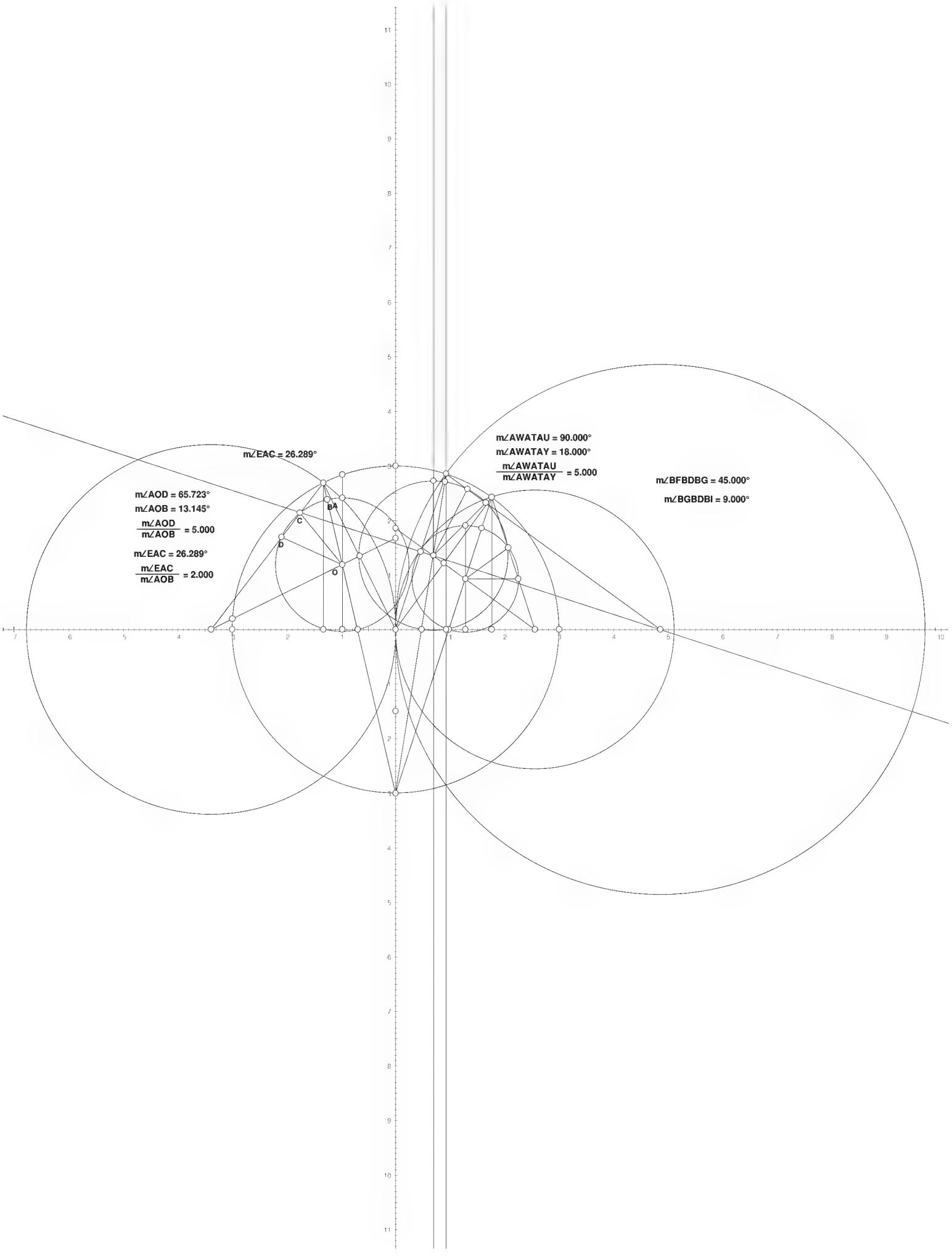

m∠CGN = 90.000°
m∠MGN = 53.892°
m∠CGN / m∠MGN = 1.670
Duplicate Ratio For Angles
m∠KMJ = 15.000°
m∠EMF = 8.982°
m∠KMJ / m∠EMF = 1.670
N
Q
M
P
O
G
H
F
E
FM
D
C
B
A
K
J
T

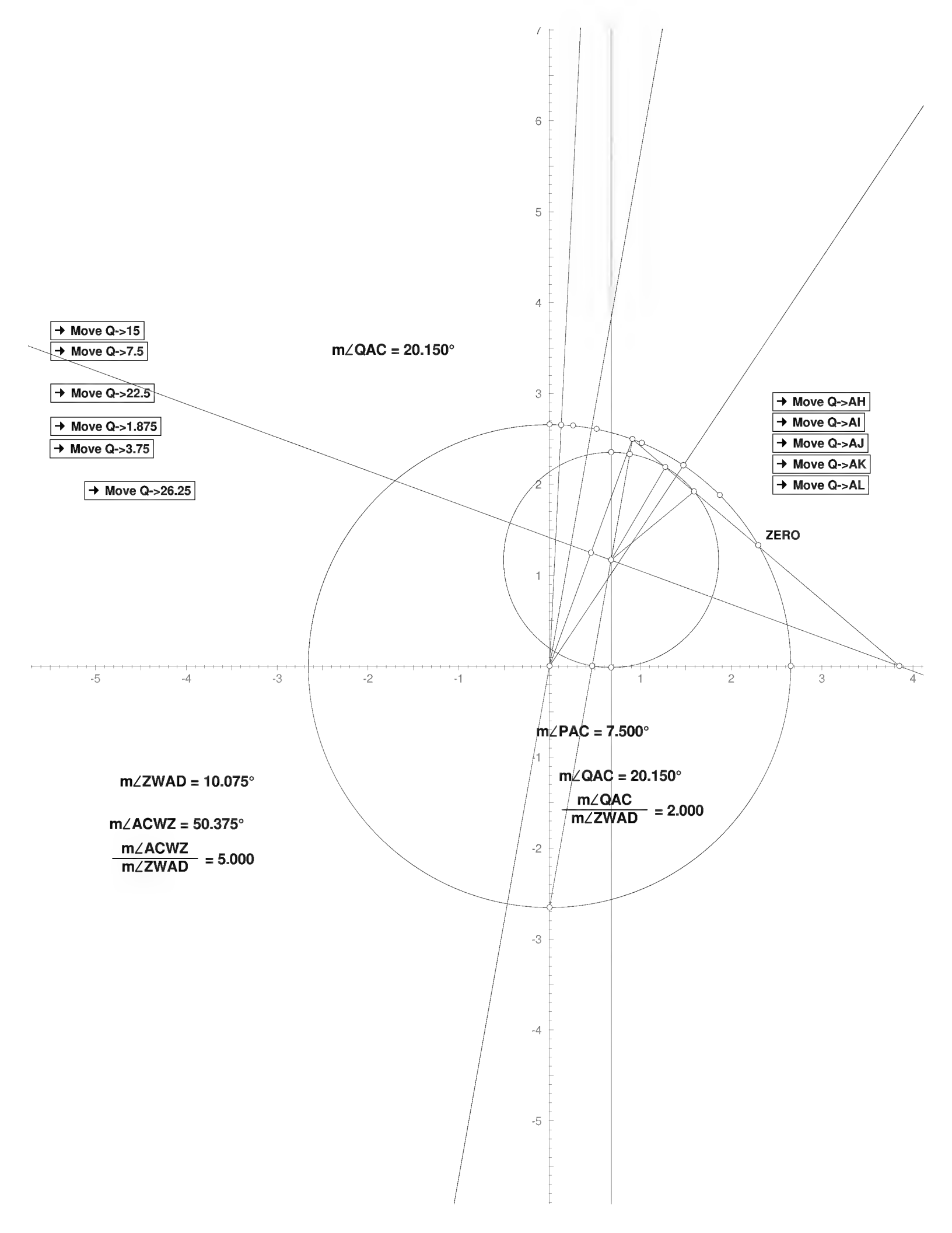

m∠CYGJP = 11.996°
m∠CTBG = 33.981°
m∠CTBG / m∠CYCXDD = 4.000
m∠CYCXDD = 8.495°
m∠CUGCY / m∠CYCXDD = 6.000
m∠CUGCY = 50.972°
m∠CTJDH = 67.962°
m∠CTJDH / m∠CYCXDD = 8.000
CU
DF
G
H
F
E
D
C
B
A
JD
H
T

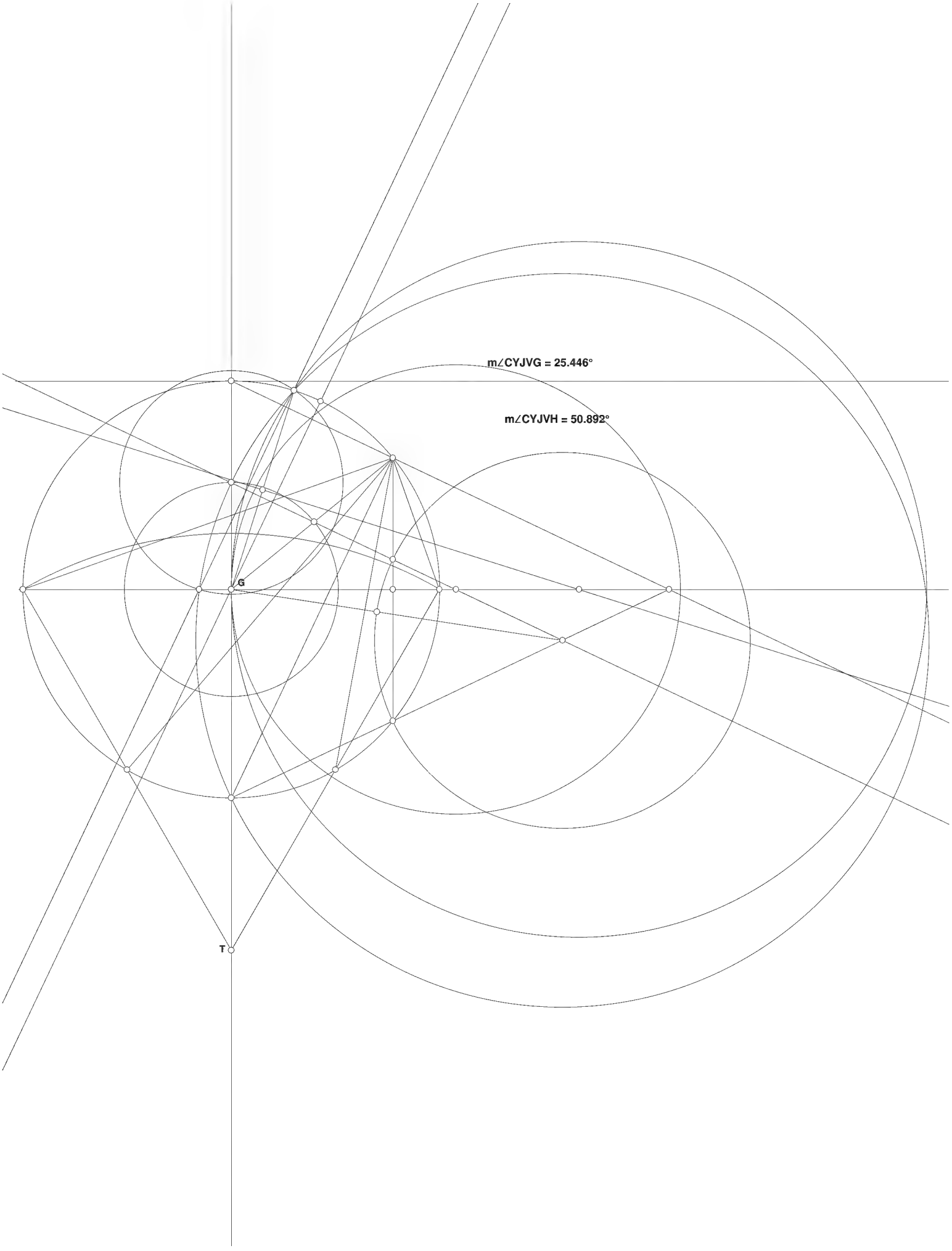

KF
KI
KD
KE
CU
G
H
D
C
B
A
T
m∠CUGCY = 72.467°
m∠KEKAKD = 24.156°
m∠CUGCY / m∠KEKAKD = 3.000
m∠KEKAKF = 60.389°
m∠KEKAKD = 24.156°
m∠KEKAKF / m∠KEKAKD = 2.500
m∠CTKAKF = 12.078°
m∠KEKAKF / m∠CTKAKF = 5.000

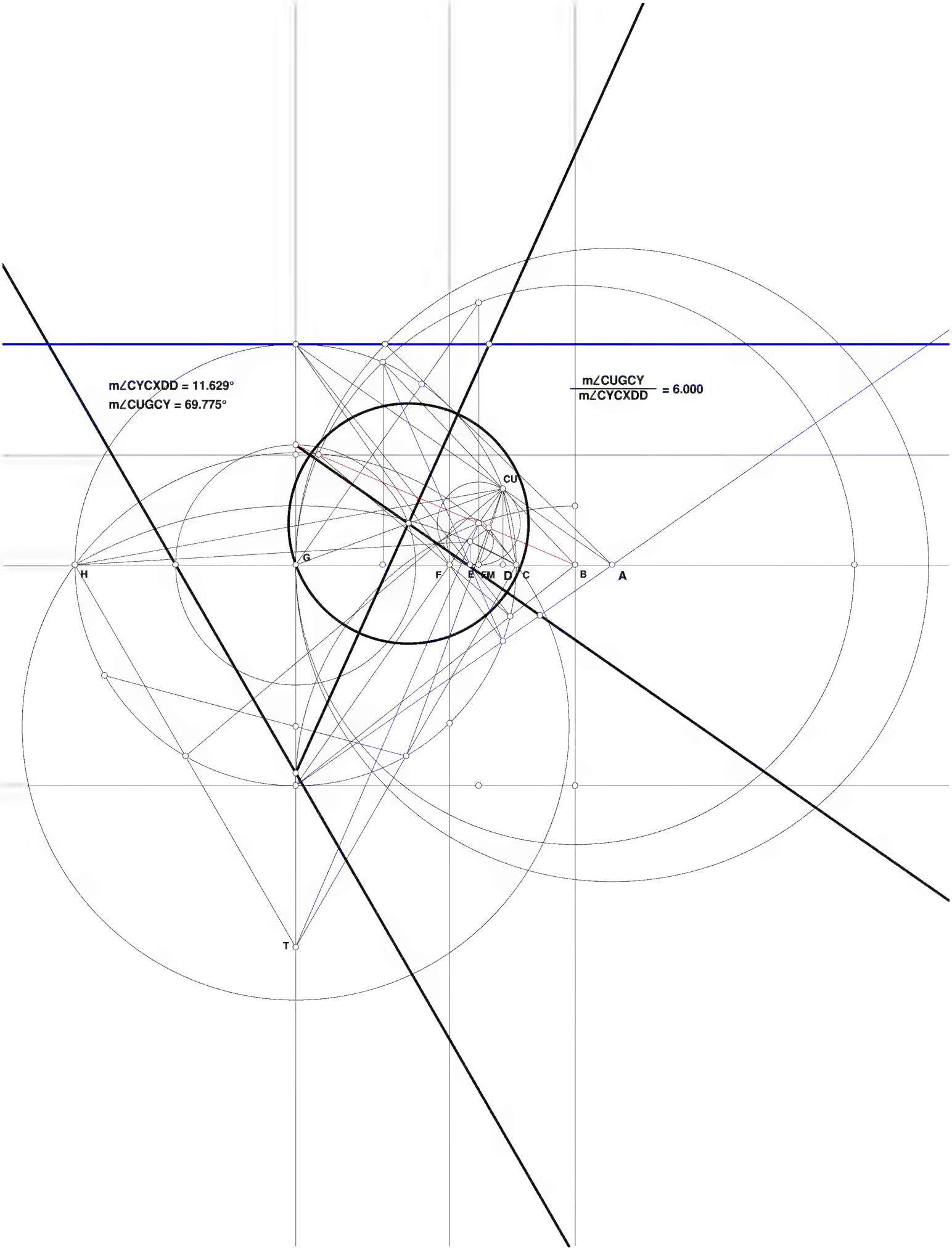

m∠CTBG = 37.113°
m∠CUGCY = 55.670°
TH = 4.992 inches
TJR = 4.992 inches
TCT = 4.992 inches
CU
G
H
D
C
B
A
H
T

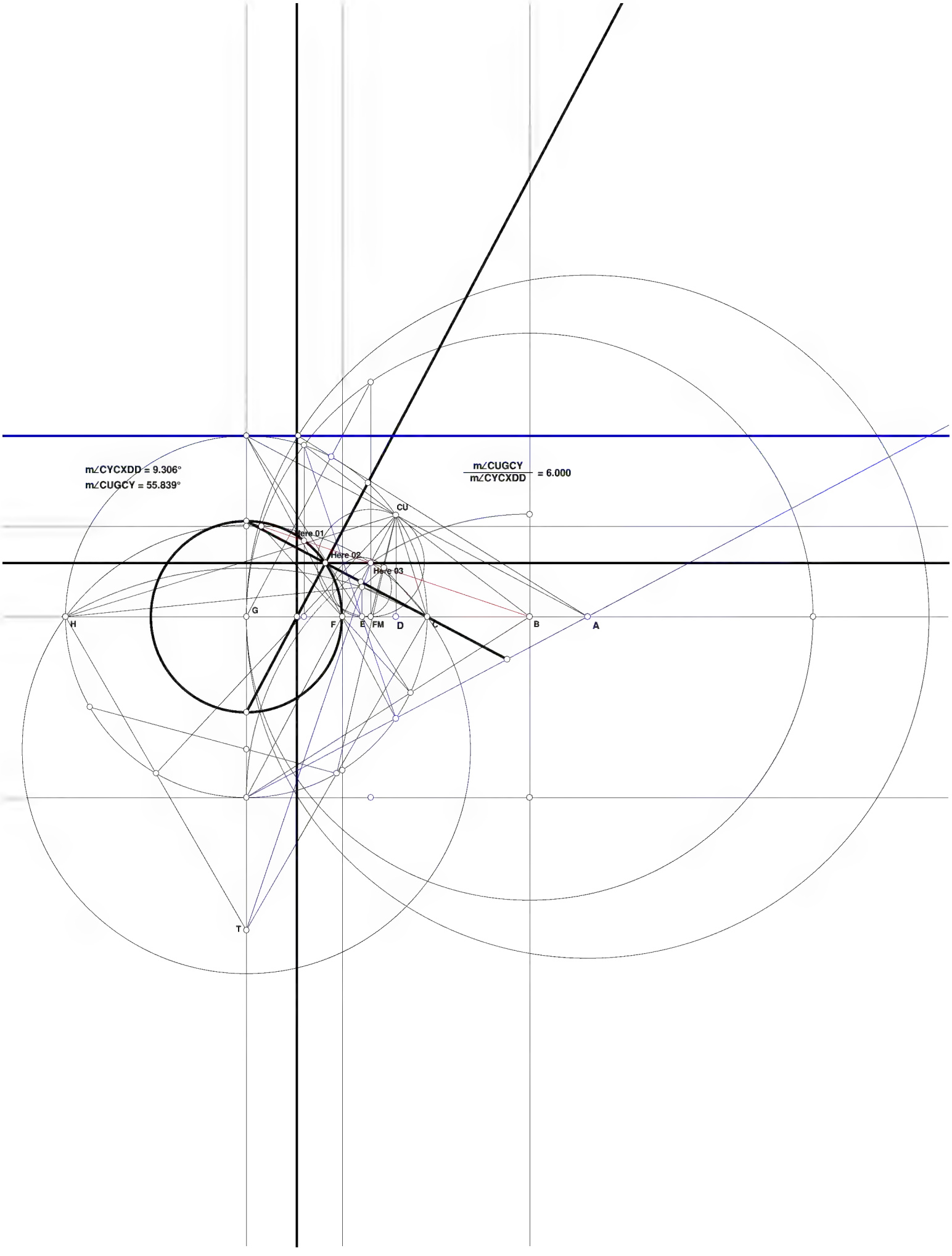

m∠JMDG = 62.230°
m∠KZGCY = 21.039°
m∠KXGLA = 34.418°
m∠JMGLA = 34.459°
m∠KXGLA / m∠JMGLA = 0.999
G
T


m∠EAC = 26.289°
m∠AOD = 65.723°
m∠AOB = 13.145°
m∠AOD / m∠AOB = 5.000
m∠EAC = 26.289°
m∠EAC / m∠AOB = 2.000
m∠AWATAU = 90.000°
m∠AWATAY = 18.000°
m∠AWATAU / m∠AWATAY = 5.000
m∠BFBDBG = 45.000°
m∠BGBDBI = 9.000°
A
B
C
D
O

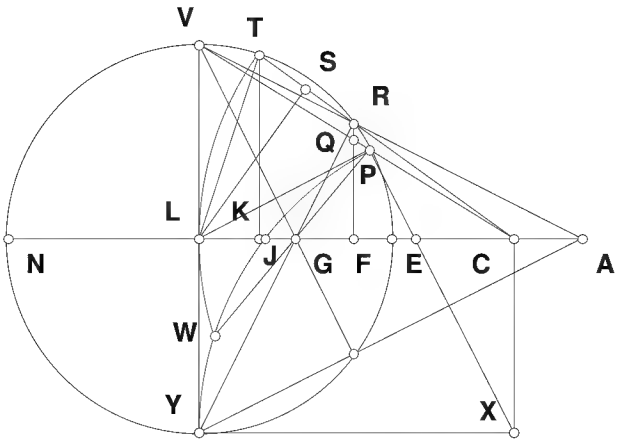

→ Move Q->15
→ Move Q->7.5
→ Move Q->22.5
→ Move Q->1.875
→ Move Q->3.75
→ Move Q->26.25
m∠QAC = 20.150°
→ Move Q->AH
→ Move Q->AI
→ Move Q->AJ
→ Move Q->AK
→ Move Q->AL
ZERO
m∠PAC = 7.500°
m∠ZWAD = 10.075°
m∠QAC = 20.150°
m∠QAC / m∠ZWAD = 2.000
m∠ACWZ = 50.375°
m∠ACWZ / m∠ZWAD = 5.000


m∠CYJVG = 25.446°
m∠CYJVH = 50.892°
G
T


m∠CYCXDD = 11.629°
m∠CUGCY = 69.775°
m∠CUGCY / m∠CYCXDD = 6.000
CU
G
H
F
E
FM
D
C
B
A
T


m∠CYCXDD = 9.306°
m∠CUGCY = 55.839°
m∠CUGCY / m∠CYCXDD = 6.000
CU
Here 01
Here 02
Here 03
G
H
F
E
FM
D
C
B
A
T

Point of Intersection 052701



Do RY and PW intersect at G?

$N := 5 \qquad CE := 1 \qquad CN := CE \cdot N$

$EN := CN - CE \qquad EL := \frac{EN}{2} \qquad LV := EL$

$LT := EL \qquad LY := EL \qquad CL := CE + EL \qquad CT := CL$

$S_1 := CL \qquad S_2 := CT \qquad S_3 := LT$

$KL := \frac{S_3^2 + S_1^2 - S_2^2}{2 \cdot S_1} \qquad CK := CL - KL \qquad CS := CK \qquad ST := CT - CS \qquad RS := ST$

$CR := CT - (ST + RS) \qquad CF := \frac{CK \cdot CR}{CT} \qquad FR := \sqrt{CR^2 - CF^2} \qquad FQ := \frac{LV \cdot CF}{CL} \qquad FL := CL - CF$

$GL := \frac{FL \cdot LY}{(LY + FR)}$

Some Algebraic Names:

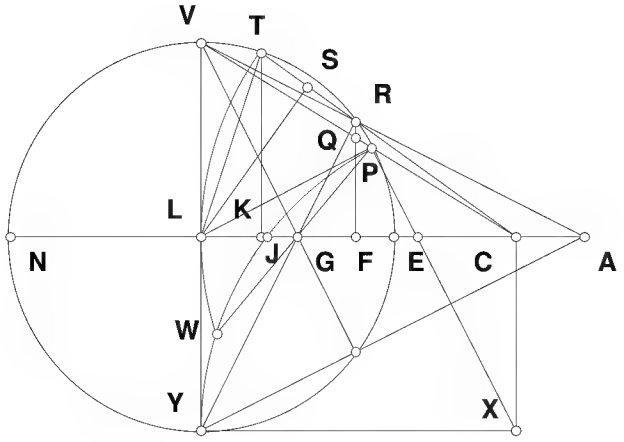
$CE \cdot N - CN = 0 \qquad CE \cdot N - CE - EN = 0 \qquad \frac{1}{2} \cdot CE \cdot N - \frac{1}{2} \cdot CE - EL = 0 \qquad \frac{1}{2} \cdot CE + \frac{1}{2} \cdot CE \cdot N - CL = 0$

$\frac{1}{4} \cdot CE \cdot \frac{(N-1)^2}{(1+N)} - KL = 0 \qquad \frac{1}{4} \cdot CE \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1+N)} - CK = 0 \qquad \frac{1}{4} \cdot CE \cdot \frac{\left(1 - 2 \cdot N + N^2\right)}{(1+N)} - ST = 0$

$2 \cdot CE \cdot \frac{N}{(1+N)} - CR = 0 \qquad CE \cdot \frac{\left(1 + 6 \cdot N + N^2\right)}{(1+N)^3} \cdot N - CF = 0$

$CE \cdot \sqrt{3 \cdot N^2 + 10 \cdot N + 3} \cdot N \cdot \frac{(N-1)}{(1+N)^3} - FR = 0 \qquad CE \cdot (N-1) \cdot \left(1 + 6 \cdot N + N^2\right) \cdot \frac{N}{(1+N)^4} - FQ = 0$

$\frac{1}{2} \cdot CE \cdot \frac{\left(1 + 2 \cdot N - 6 \cdot N^2 + 2 \cdot N^3 + N^4\right)}{(1+N)^3} - FL = 0$



$$GL := \frac{1}{2} \cdot \frac{CE \cdot \left(N^2 + 4 \cdot N + 1\right) \cdot (N-1)^2}{\left[N^3 + 3 \cdot N^2 + 2\,N \cdot \sqrt{(N+3) \cdot (3 \cdot N + 1)} + 3 \cdot N + 1\right]}$$

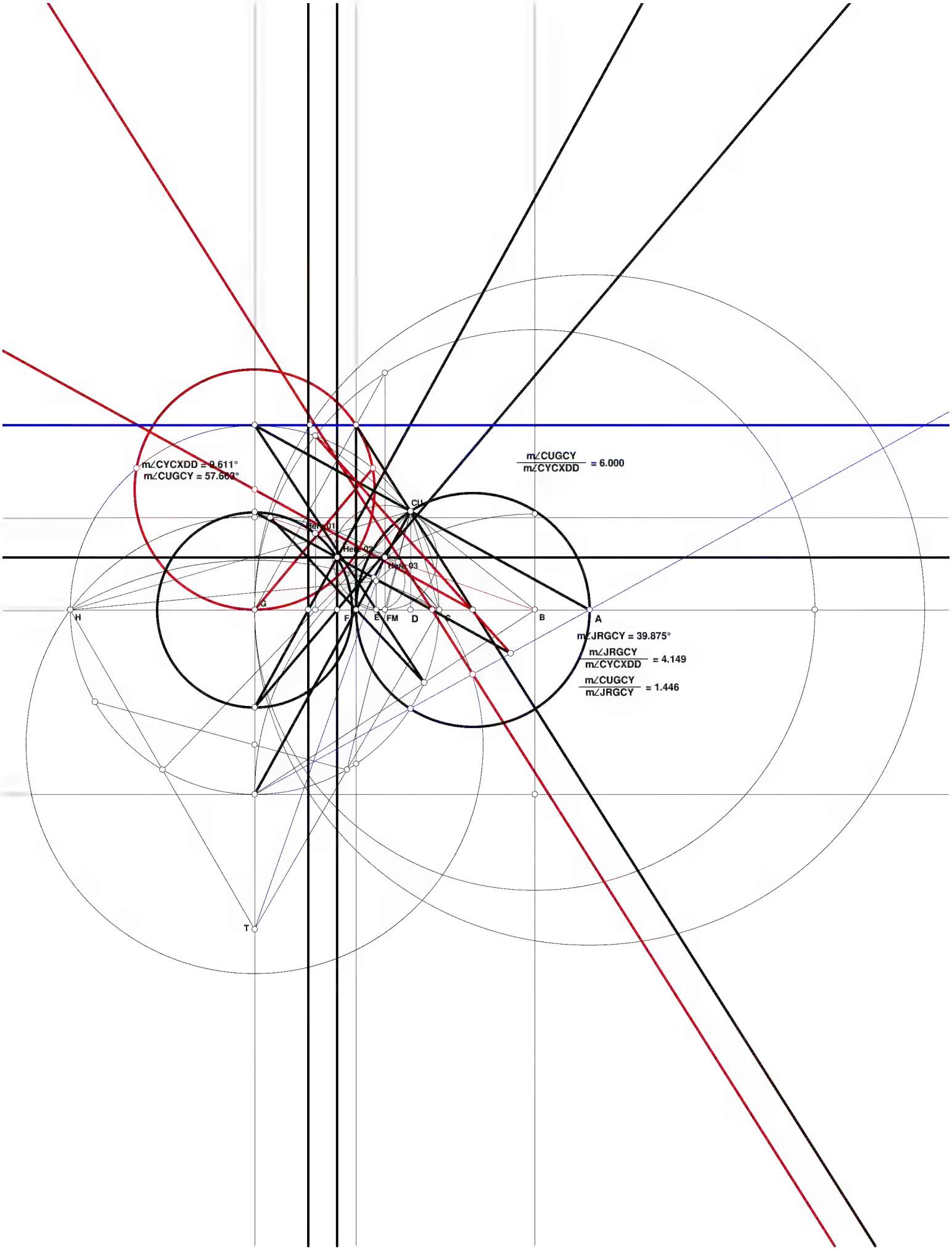
From Segment DF And HM 052201:

$$\frac{1}{2} \cdot \frac{CE \cdot \left(N^3 + 3 \cdot N^2 + 3 \cdot N - 2\,N \cdot \sqrt{3 \cdot N^2 + 10 \cdot N + 3} + 1\right)}{\left(N^2 + 4 \cdot N + 1\right)} - GL = 0$$

$$\frac{\frac{1}{2} \cdot \frac{CE \cdot \left(N^3 + 3 \cdot N^2 + 3 \cdot N - 2\,N \cdot \sqrt{3 \cdot N^2 + 10 \cdot N + 3} + 1\right)}{\left(N^2 + 4 \cdot N + 1\right)}}{\frac{1}{2} \cdot \frac{CE \cdot \left(N^2 + 4 \cdot N + 1\right) \cdot (N-1)^2}{\left[N^3 + 3 \cdot N^2 + 2\,N \cdot \sqrt{(N+3) \cdot (3 \cdot N + 1)} + 3 \cdot N + 1\right]}} = 1$$

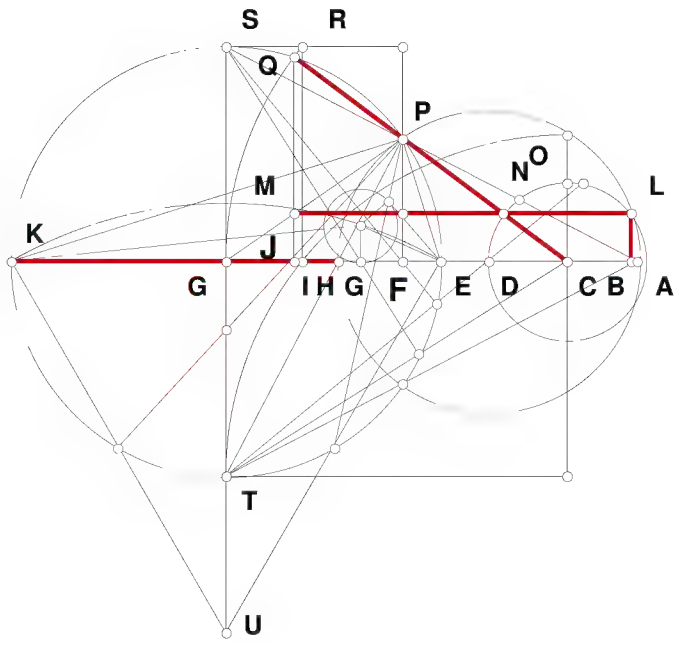
Which does reduce to,

$$1 = 1$$


m∠CYCXDD = 9.611°
m∠CUGCY = 57.669°
m∠CUGCY / m∠CYCXDD = 6.000
CU
Helper 01
Helper 02
Helper 03
G
H
F
E
FM
D
C
B
A
T
m∠JRGCY = 39.875°
m∠JRGCY / m∠CYCXDD = 4.149
m∠CUGCY / m∠JRGCY = 1.446

What is CD and BL?

0530011



$N_1 := 1 \quad N_2 := 5$

$CE := N_1 \quad EK := N_2$

$EG := \frac{EK}{2} \quad CG := CE + EG$

$CQ := CG \quad PQ := \frac{EG^2}{CQ}$

$CP := CQ - PQ \quad GT := EG$

$CF := \frac{CP^2 + CG^2 - EG^2}{2 \cdot CG}$

$PF := \sqrt{CP^2 - CF^2} \quad GS := EG$

$FG := CG - CF \quad FS := \sqrt{FG^2 + GS^2}$

$DG := \frac{GS \cdot GT}{FG} \quad CD := CG - DG$

$BL := \frac{PF \cdot CD}{CP}$

Some Algebraic Names;

$$CE := N_1 \quad EK := N_2 \quad EG - \frac{N_2}{2} = 0 \quad CG - \left(N_1 + \frac{N_2}{2}\right) = 0$$

$$PQ - \frac{1}{2} \cdot \frac{N_2^{\,2}}{\left(2 \cdot N_1 + N_2\right)} = 0 \quad CP - 2 \cdot N_1 \cdot \frac{\left(N_1 + N_2\right)}{\left(2 \cdot N_1 + N_2\right)} = 0$$

$$CF := N_1 \cdot \left(N_1 + N_2\right) \cdot \frac{\left(8 \cdot N_1^{\,2} + 8 \cdot N_1 \cdot N_2 + N_2^{\,2}\right)}{\left(2 \cdot N_1 + N_2\right)^3}$$

$$PF - \left(N_1 + N_2\right) \cdot N_1 \cdot \sqrt{\left(N_2 + 4 \cdot N_1\right) \cdot \left(3 \cdot N_2 + 4 \cdot N_1\right)} \cdot \frac{N_2}{\left(2 \cdot N_1 + N_2\right)^3} = 0$$

$$FG - \frac{1}{2} \cdot N_2^{\,2} \cdot \frac{\left(6 \cdot N_1^{\,2} + 6 \cdot N_1 \cdot N_2 + N_2^{\,2}\right)}{\left(2 \cdot N_1 + N_2\right)^3} = 0$$

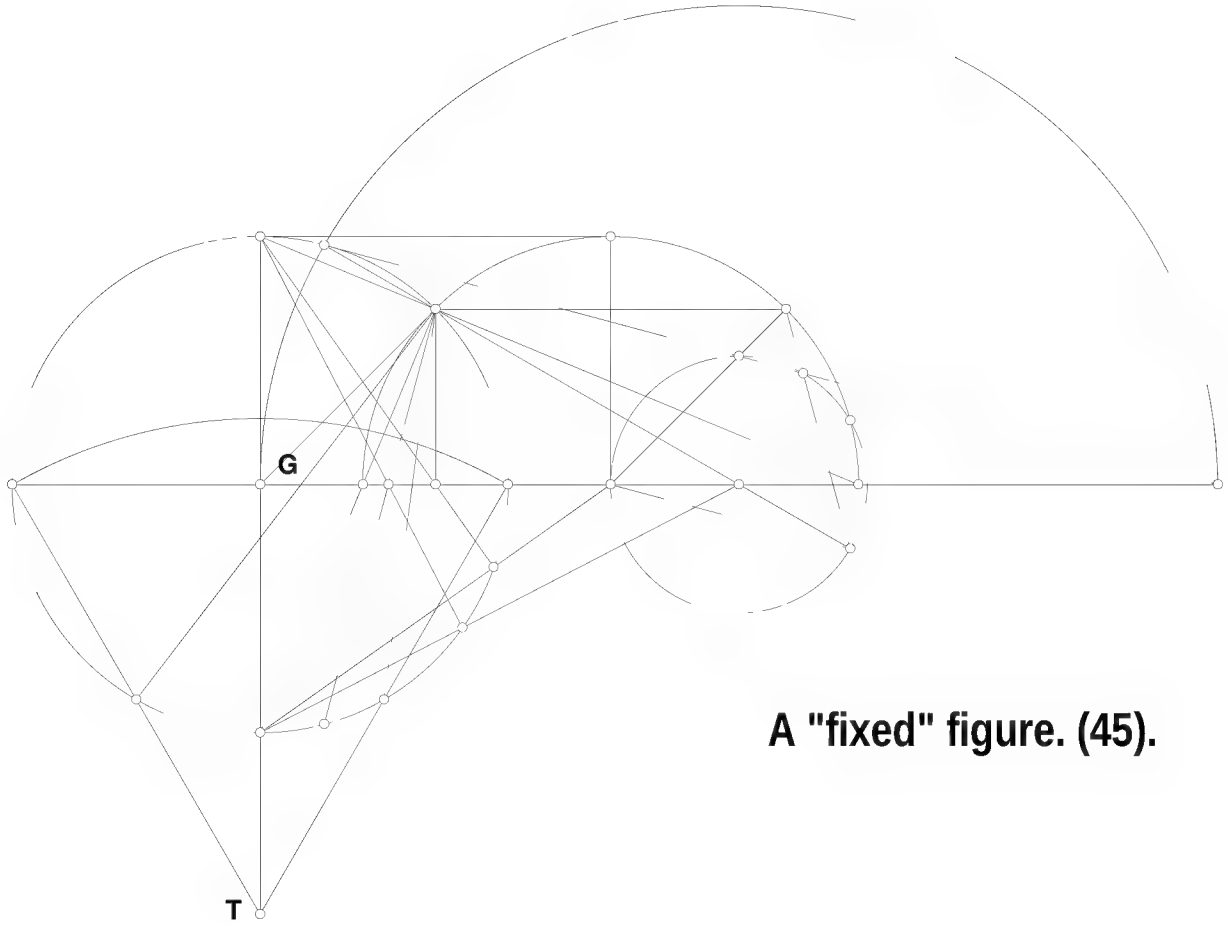
$$FS - \sqrt{\left[\frac{1}{2}\cdot N_2{}^2\cdot\frac{\left(6\cdot N_1{}^2+6\cdot N_1\cdot N_2+N_2{}^2\right)}{\left(2\cdot N_1+N_2\right)^3}\right]^2+\left(\frac{N_2}{2}\right)^2}=0 \qquad \text{OR}$$

$$FS - \left(\frac{1}{2}\right)\cdot N_2\cdot\sqrt{2}\cdot\frac{\sqrt{\left(138\cdot N_2{}^2\cdot N_1{}^4+116\cdot N_2{}^3\cdot N_1{}^3+54\cdot N_2{}^4\cdot N_1{}^2+12\cdot N_2{}^5\cdot N_1\right)\ldots}}{\left(2\cdot N_1+N_2\right)^3}=0$$
$$+\ N_2{}^6+32\cdot N_1{}^6+96\cdot N_1{}^5\cdot N_2$$

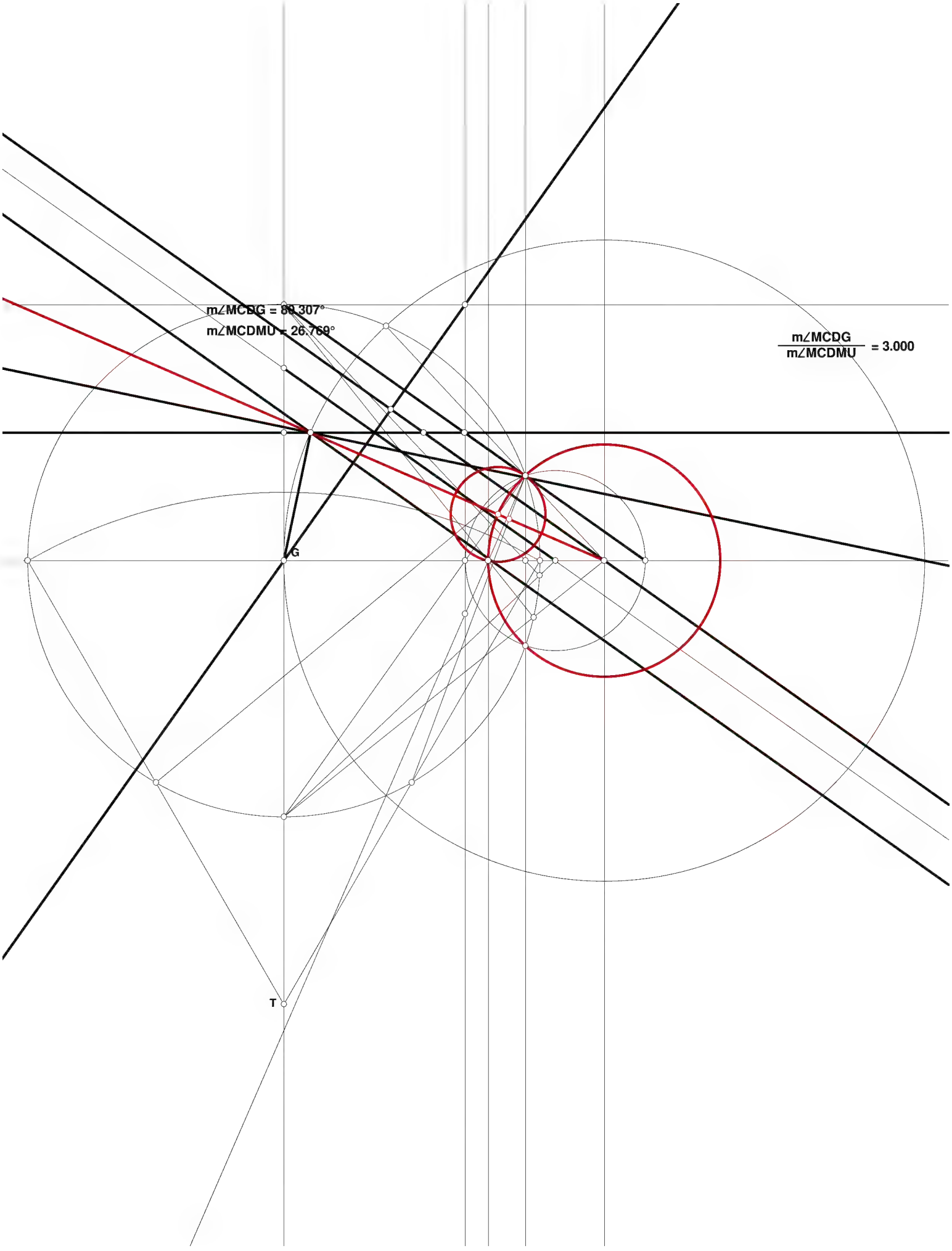
$$DG - \frac{\left(2\cdot N_1+N_2\right)^3}{\left[2\cdot\left(6\cdot N_1{}^2+6\cdot N_1\cdot N_2+N_2{}^2\right)\right]}=0$$

$$CD - N_1\cdot\left(N_1+N_2\right)\cdot\frac{\left(2\cdot N_1+N_2\right)}{\left(6\cdot N_1{}^2+6\cdot N_1\cdot N_2+N_2{}^2\right)}=0$$

$$BL - \frac{\left(N_1+N_2\right)\cdot N_1\cdot\sqrt{\left(N_2+4\cdot N_1\right)\cdot\left(3\cdot N_2+4\cdot N_1\right)}\cdot N_2}{2\cdot\left(2\cdot N_1+N_2\right)\cdot\left(6\cdot N_1{}^2+6\cdot N_1\cdot N_2+N_2{}^2\right)}=0$$

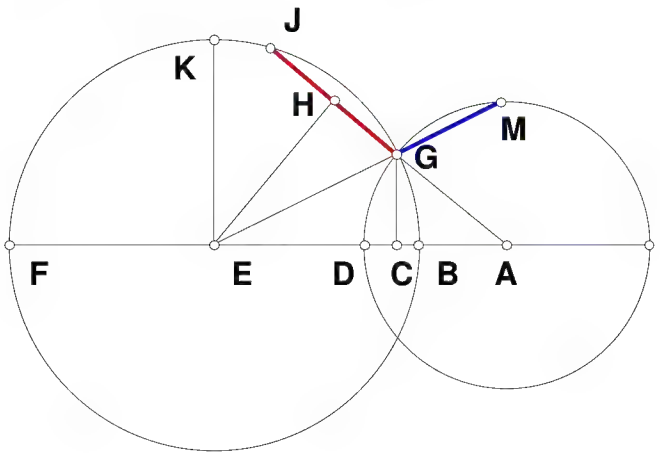


A "fixed" figure. (45).


m∠MCDG = 80.307°
m∠MCDMU = 26.769°
m∠MCDG / m∠MCDMU = 3.000
G
T

A Small Extrapolation 060101

Given AE, AG, and EG, what is the Algebraic name of the segment GJ?



$S_1 := 3 \quad S_2 := 2 \quad S_3 := 1$

$AE := S_1 \quad AG := S_2 \quad EG := S_3$

$$AC := \frac{AG^2 + AE^2 - EG^2}{2\,AE}$$

$$AH := \frac{AC \cdot AE}{AG} \quad GH := AH - AG$$

$HJ := GH \quad GJ := GH + HJ$

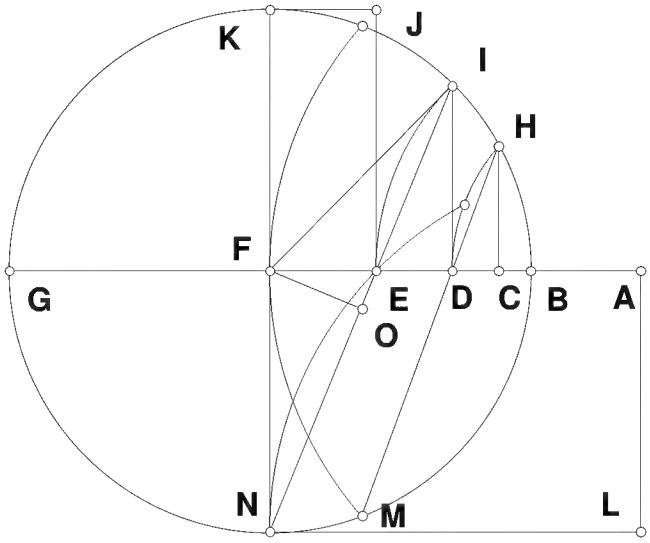
Some Algebraic Names:

$$\frac{S_2^2 + S_1^2 - S_3^2}{2\,S_1} - AC = 0 \qquad \frac{S_1^2 + S_2^2 - S_3^2}{2\,S_2} - AH = 0 \qquad \frac{S_1^2 - S_2^2 - S_3^2}{2\,S_2} - GH = 0$$

$$\frac{S_1^2 - S_2^2 - S_3^2}{S_2} - GJ = 0 \qquad \frac{S_1^2 - S_2^2 - S_3^2}{S_3} - GM = \ ?$$

Units From Both Sides 060201

Start with AB as unit and find. . . . then start with . . . . as unit and find AB.



$N := 5.727 \qquad AB := .573 \qquad AG := AB \cdot N$

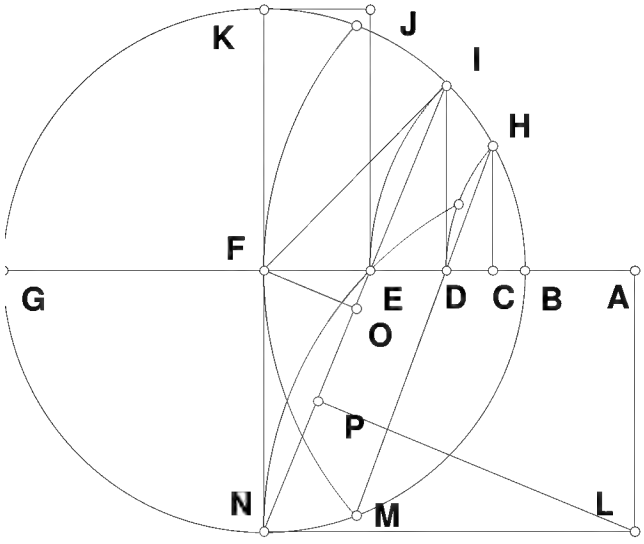
$BG := AG - AB \qquad BF := \frac{BG}{2} \qquad AF := AB + BF$

$AE := \sqrt{AB \cdot AG} \qquad BE := AE - AB$

$AB \cdot (N - 1) - BG = 0$

$\frac{1}{2} \cdot AB \cdot (N - 1) - BF = 0$

$\frac{1}{2} \cdot AB \cdot (1 + N) - AF = 0 \qquad AB \sqrt{N} - AE = 0 \qquad AB \cdot \left(\sqrt{N} - 1\right) - BE = 0$



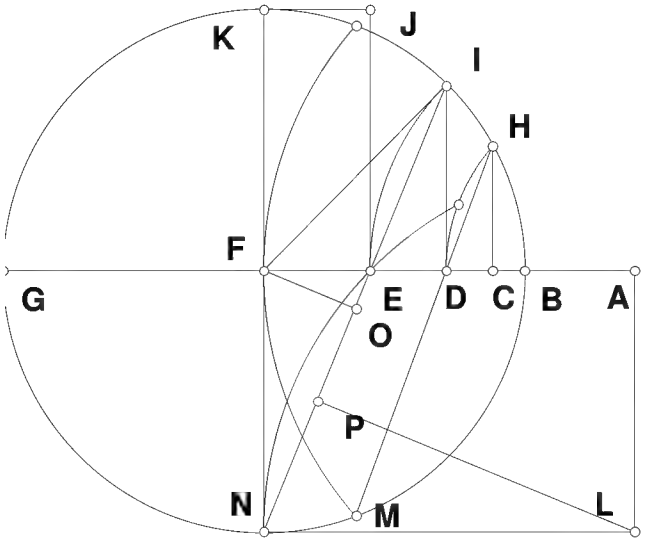
$N_2 := 2 \qquad BG_2 := 1 \qquad BF_2 := \frac{BG_2}{2}$

$BE_2 := \frac{BF_2}{N_2} \qquad EF_2 := BF_2 - BE_2$

$FN_2 := BF_2 \qquad EN_2 := \sqrt{EF_2^2 + FN_2^2}$

$NP_2 := \frac{EN_2}{2} \qquad LN_2 := \frac{EN_2 \cdot NP_2}{EF_2}$

$AF_2 := LN_2 \qquad AB_2 := AF_2 - BF_2$



$$\frac{BG_2}{2} - BF_2 = 0 \qquad \frac{BG_2}{(2 \cdot N_2)} - BE_2 = 0$$

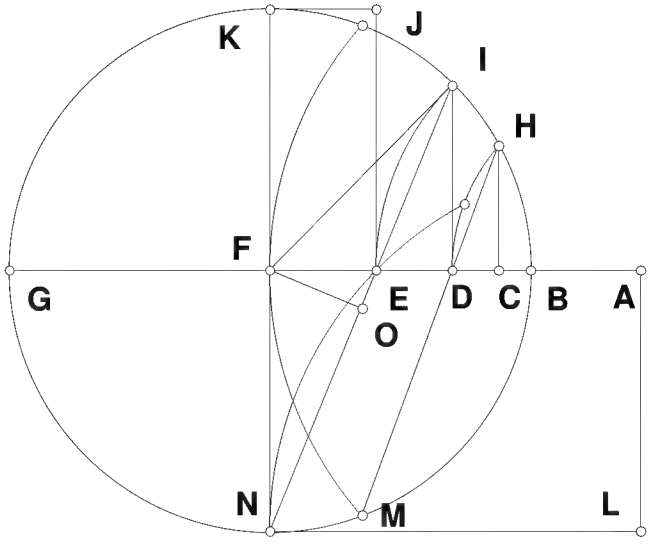
$$\frac{BG_2}{2} \cdot \frac{(N_2 - 1)}{N_2} - EF_2 = 0$$

$$\frac{BG_2}{2} \cdot \frac{\sqrt{2 \cdot N_2^2 - 2 \cdot N_2 + 1}}{N_2} - EN_2 = 0$$

$$\frac{BG_2}{4} \cdot \frac{\sqrt{2 \cdot N_2^2 - 2 \cdot N_2 + 1}}{N_2} - NP_2 = 0$$

$$\frac{BG_2}{4} \cdot \frac{(2 \cdot N_2^2 - 2 \cdot N_2 + 1)}{[N_2 \cdot (N_2 - 1)]} - LN_2 = 0$$

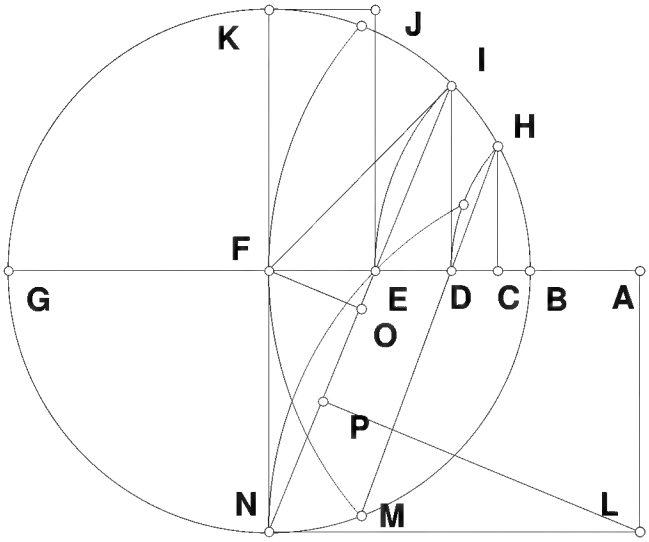
$$\frac{BG_2}{4 \cdot N_2 \cdot (N_2 - 1)} - AB_2 = 0$$



$$AI := AE \quad FI := BF \quad AD := \frac{AI^2 + AF^2 - FI^2}{2\,AF}$$

$$BD := AD - AB$$

$$AD := 2 \cdot AB \cdot \frac{N}{(N+1)} \qquad BD := AB \cdot \frac{(N-1)}{(1+N)}$$



$N_3 := 3.364 \quad BG_3 := 2.708 \quad BF_3 := \frac{BG_3}{2}$

$BD_3 := \frac{BF_3}{N_3} \quad DG_3 := BG_3 - BD_3$

$DI_3 := \sqrt{BD_3 \cdot DG_3} \quad DF_3 := BF_3 - BD_3$

$FN_3 := BF_3 \quad EF_3 := \frac{DF_3 \cdot FN_3}{FN_3 + DI_3}$

$EN_3 := \sqrt{EF_3^2 + FN_3^2} \quad NP_3 := \frac{EN_3}{2}$

$LN_3 := \frac{EN_3 \cdot NP_3}{EF_3} \quad AF_3 := LN_3$

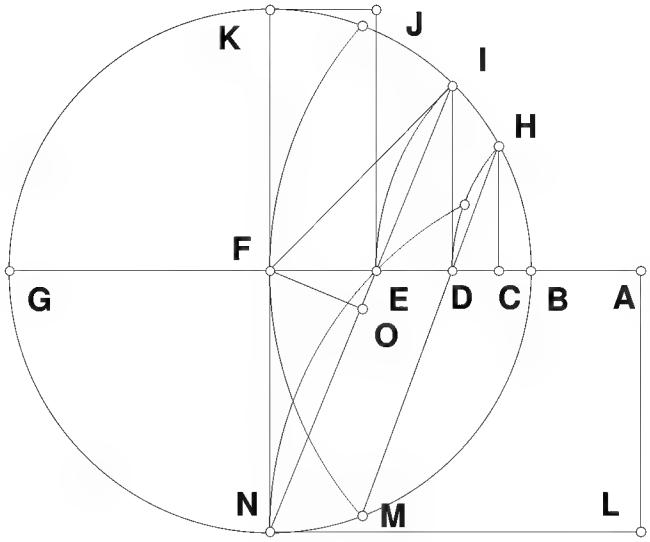
$AB_3 := AF_3 - BF_3 \quad AB_3 = 0.573$

$BD_3 := \frac{1}{2} \cdot \frac{BG_3}{N_3} \quad DG_3 := \frac{1}{2} \cdot BG_3 \cdot \frac{(2 \cdot N_3 - 1)}{N_3} \quad DI_3 := \frac{1}{(2 \cdot N_3)} \cdot BG_3 \cdot \sqrt{2 \cdot N_3 - 1}$

$DF_3 := \frac{1}{2} \cdot BG_3 \cdot \frac{(N_3 - 1)}{N_3} \quad EF_3 := \frac{1}{2} \cdot BG_3 \cdot \frac{(N_3 - 1)}{(N_3 + \sqrt{2 \cdot N_3 - 1})}$

$EN_3 := \frac{1}{2} \cdot BG_3 \cdot \sqrt{2} \cdot \sqrt{\frac{N_3}{(N_3 + \sqrt{2 \cdot N_3 - 1})}} \quad NP_3 := \frac{1}{4} \cdot BG_3 \cdot \sqrt{2} \cdot \sqrt{\frac{N_3}{(N_3 + \sqrt{2 \cdot N_3 - 1})}}$

$LN_3 := \frac{1}{2} \cdot BG_3 \cdot \frac{N_3}{(N_3 - 1)} \quad AB_3 := \frac{1}{2} \cdot \frac{BG_3}{(N_3 - 1)}$



$$AH := AD$$

$$FH := BF \qquad AC := \frac{AH^2 + AF^2 - FH^2}{2 \cdot AF}$$

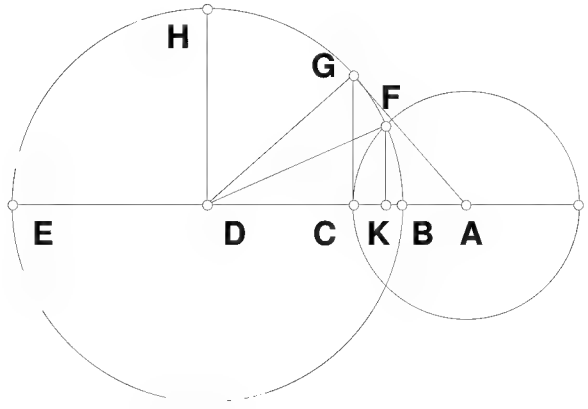
$$BC := AC - AB$$

$$AB \cdot \left(\sqrt{N} - 1\right) - BE = 0$$

$$AC := AB \cdot N \cdot \frac{\left(6 \cdot N + 1 + N^2\right)}{(N+1)^3} \qquad BC := AB \cdot (3 \cdot N + 1) \cdot \frac{(N-1)}{(N+1)^3}$$

Isolating A Problem 060301

If one is given point F, then finding point G would lead straightway to the solution. How is BK related to BC?



$N := 4 \qquad BE := 1$

$BD := \frac{BE}{2} \qquad BC := \frac{BE}{N} \qquad CE := BE - BC$

$CG := \sqrt{BC \cdot CE} \qquad CD := BD - BC \qquad AC := \frac{CG^2}{CD}$

$AF := AC \qquad AD := AC + CD \qquad DF := BD$

$DK := \frac{DF^2 + AD^2 - AF^2}{2\ AD} \qquad BK := BD - DK$

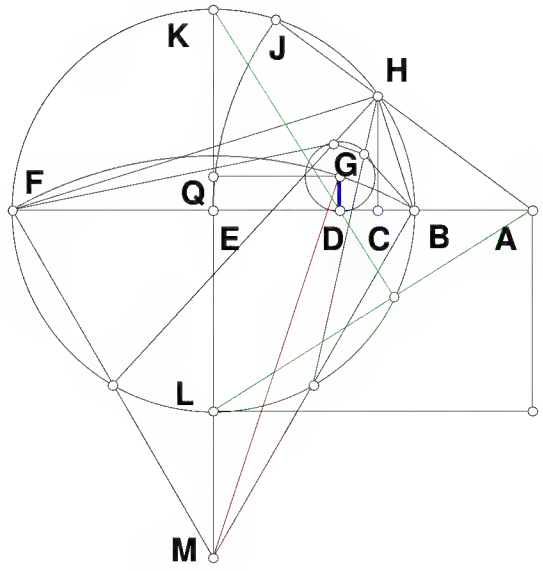
$CK := BC - BK$

$BE \cdot \frac{(N-1)}{N} - CE = 0 \qquad BE \cdot \frac{\sqrt{(N-1)}}{N} - CG = 0 \qquad BE \cdot \frac{(N-2)}{2 \cdot N} - CD = 0$

$BE \cdot \frac{2 \cdot (N-1)}{N \cdot (N-2)} - AC = 0 \qquad BE \cdot \frac{N}{2 \cdot (N-2)} - AD = 0 \qquad BE \cdot \frac{(N-2) \cdot \left(N^2 + 2 \cdot N - 2\right)}{2 \cdot N^3} - DK = 0$

$BE \cdot \frac{(3 \cdot N - 2)}{N^3} - BK = 0 \qquad BE \cdot \frac{(N-1) \cdot (N-2)}{N^3} - CK = 0 \qquad \frac{BK}{BC} - \frac{(3 \cdot N - 2)}{N^2} = 0$

For Any AB 061001



For any AB, AF what is DG?

$N := 4.39 \quad AB := .615 \quad AF := AB \cdot N$

$BF := AF - AB \quad BE := \frac{BF}{2} \quad EK := BE$

$AE := AB + BE \quad DE := \frac{EK^2}{AE} \quad EF := BE$

$FM := BF \quad EM := \sqrt{FM^2 - EF^2} \quad GM := FM$

$GQ := DE \quad MQ := \sqrt{GM^2 - GQ^2} \quad EQ := MQ - EM$

$DG := EQ$

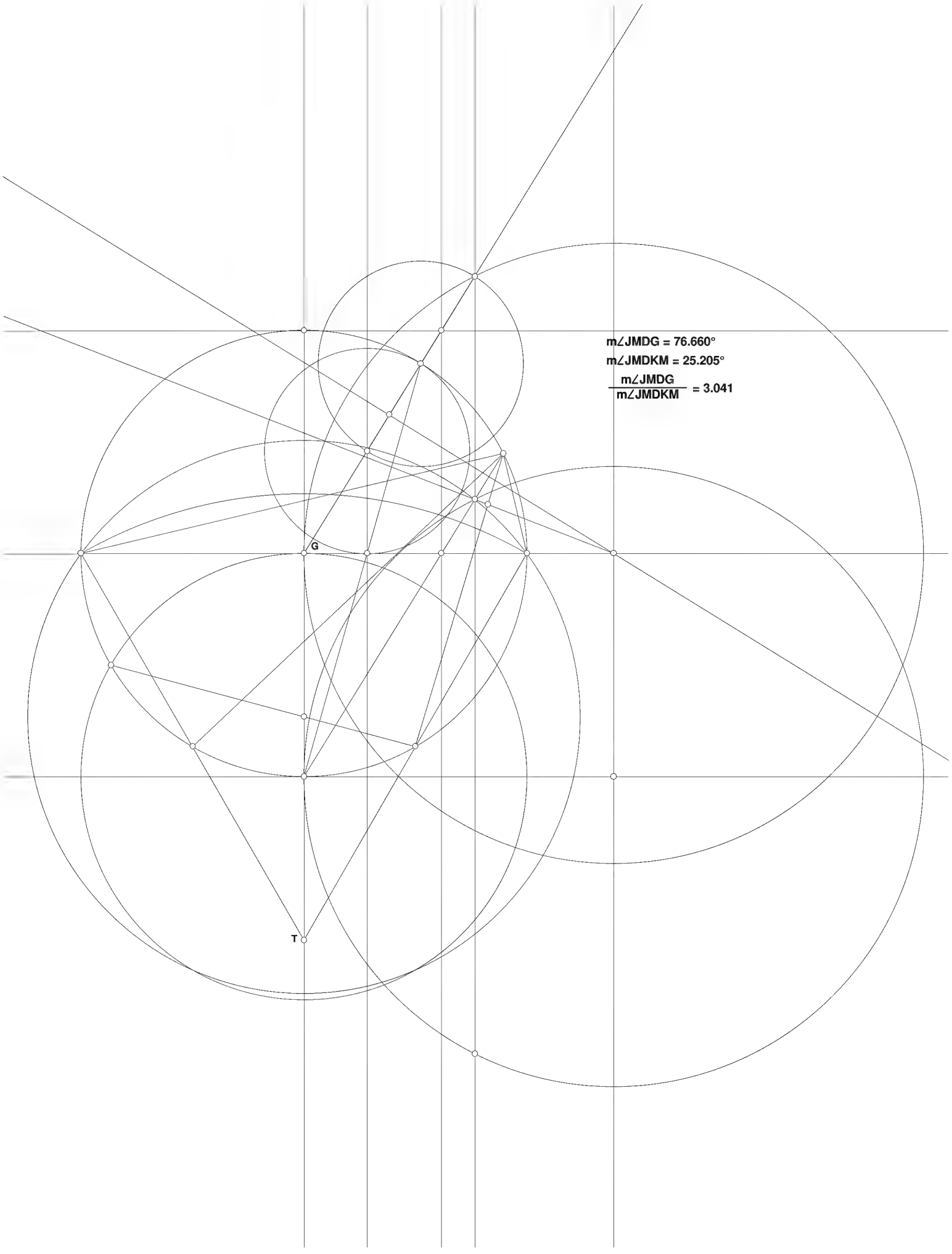
Some Algebraic Names:

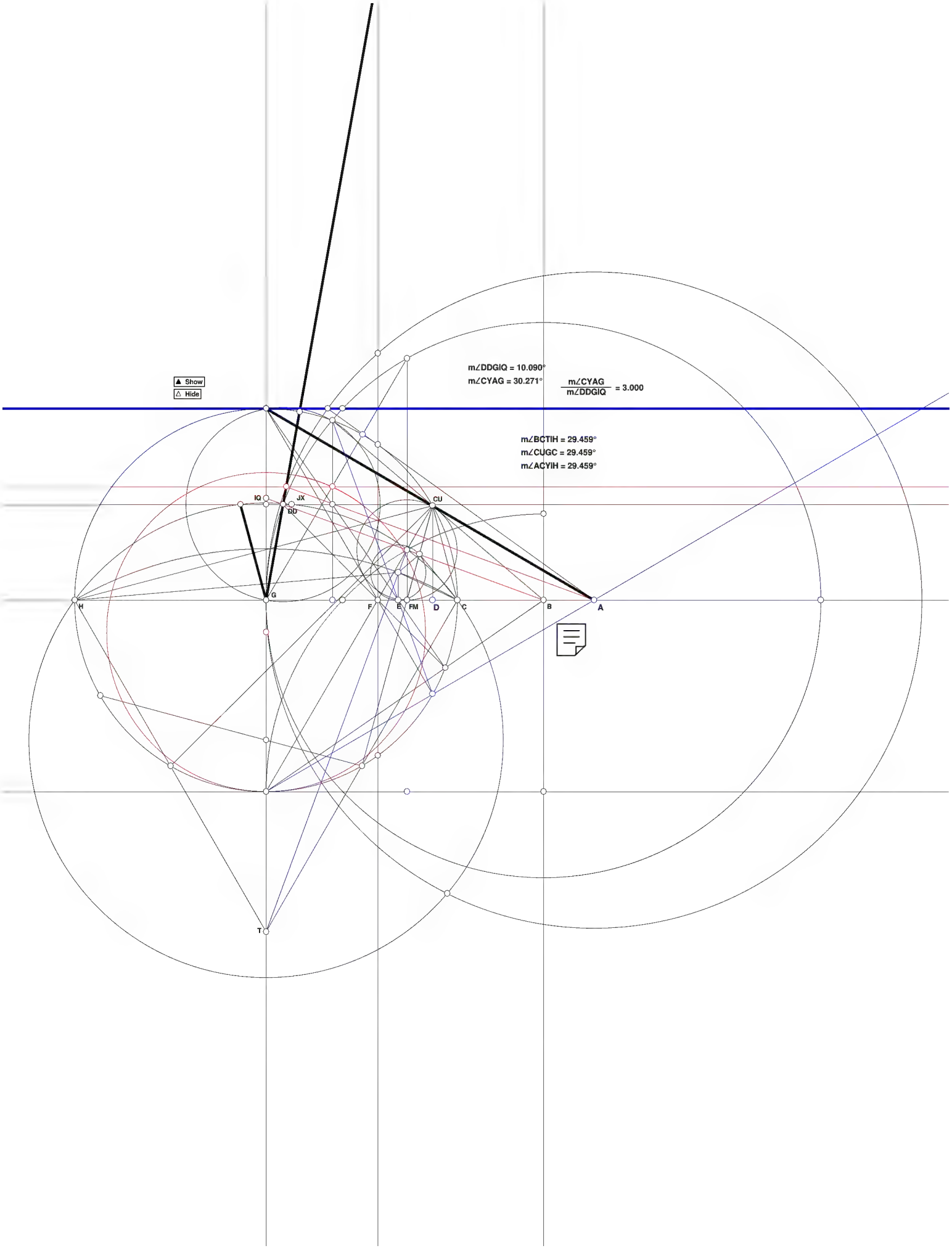
$$AB \cdot (N - 1) - BF = 0 \qquad \frac{AB \cdot (N - 1)}{2} - BE = 0 \qquad \frac{1}{2} \cdot AB \cdot (N + 1) - AE = 0$$

$$\frac{1}{2} \cdot AB \cdot \frac{(N - 1)^2}{(N + 1)} - DE = 0 \qquad \frac{1}{2} \cdot \sqrt{3} \cdot AB \cdot (N - 1) - EM = 0$$

$$\frac{AB \cdot \left[\sqrt{(N + 3) \cdot (3 \cdot N + 1)} \cdot (N - 1)\right]}{2 \cdot (N + 1)} - MQ = 0$$

$$\frac{AB \cdot (N - 1) \cdot \left[\sqrt{(N + 3) \cdot (3 \cdot N + 1)} - \sqrt{3} - \sqrt{3} \cdot N\right]}{2 \cdot (N + 1)} - DG = 0$$

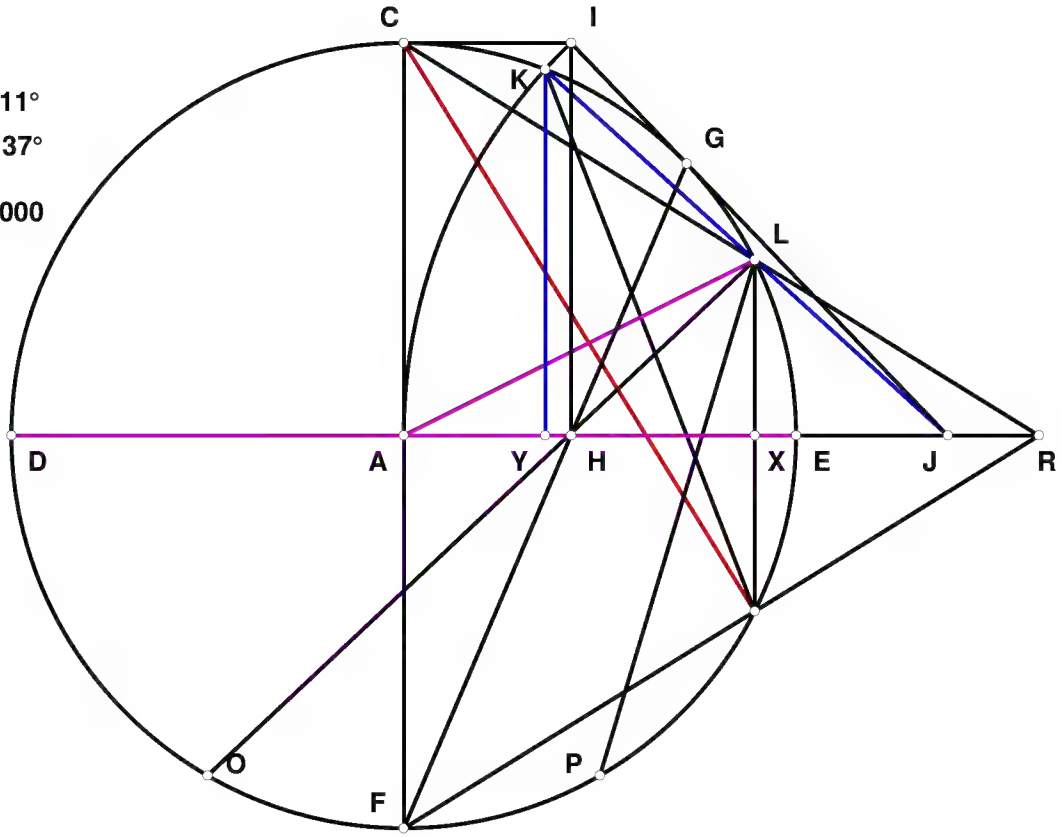

m∠JMDG = 76.660°
m∠JMDKM = 25.205°
m∠JMDG / m∠JMDKM = 3.041
G
T


Show
Hide
m∠DDGIQ = 10.090°
m∠CYAG = 30.271°
m∠CYAG / m∠DDGIQ = 3.000
m∠BCTIH = 29.459°
m∠CUGC = 29.459°
m∠ACYIH = 29.459°
IQ
JX
DD
CU
G
H
F
E
FM
D
C
B
A
T

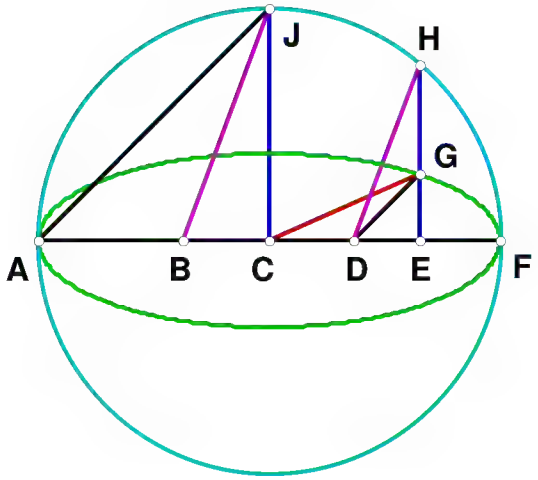
$m\angle LAC = 63.411°$

$m\angle KAC = 21.137°$

$\frac{m\angle LAC}{m\angle KAC} = 3.000$



Elipse By Parallels 082601



$N_1 := 4 \quad N_2 := 1$

$AF := 1 \quad AC := \frac{AF}{2} \quad CJ := AC$

$BC := \frac{AC}{N_1} \qquad AE := \frac{AF}{N_2}$

$EF := AF - AE \quad EH := \sqrt{AE \cdot EF} \quad EG := \frac{BC \cdot EH}{CJ}$

$CE := AE - AC \quad CG := \sqrt{CE^2 + EG^2}$

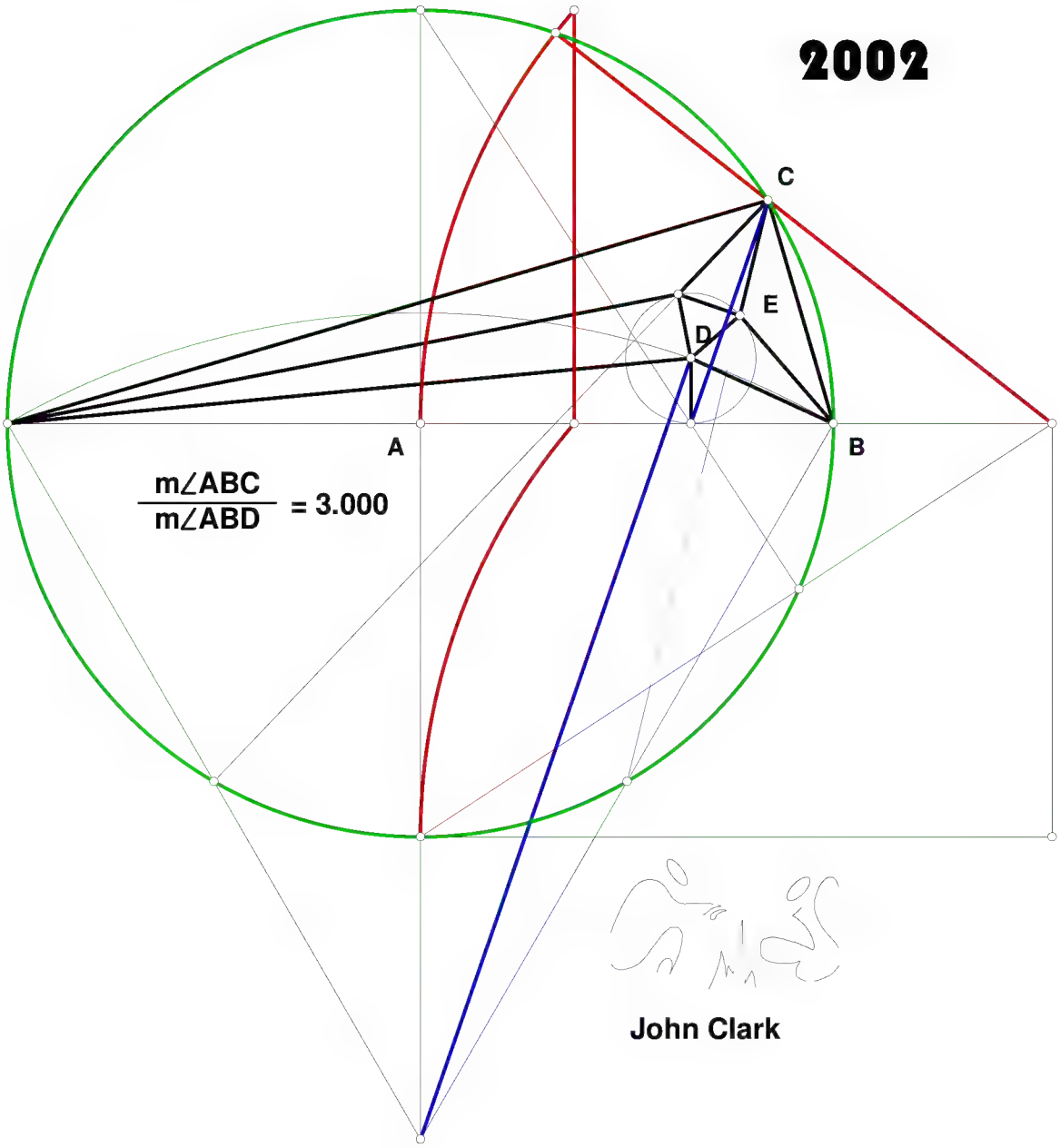
Some Algebraic Names:

$BC := \frac{1}{(2 \cdot N_1)} \quad AE := \frac{1}{N_2} \quad EF := 1 - \frac{1}{N_2} \quad EH := \frac{\sqrt{N_2 - 1}}{N_2} \quad EG := \frac{\sqrt{N_2 - 1}}{N_1 \cdot N_2}$

$CE := \frac{1}{N_2} - \frac{1}{2} \quad CG := \frac{1}{2} \cdot \frac{\sqrt{4 \cdot {N_1}^2 - 4 \cdot {N_1}^2 \cdot N_2 + {N_1}^2 \cdot {N_2}^2 + 4 \cdot N_2 - 4}}{(N_1 \cdot N_2)}$

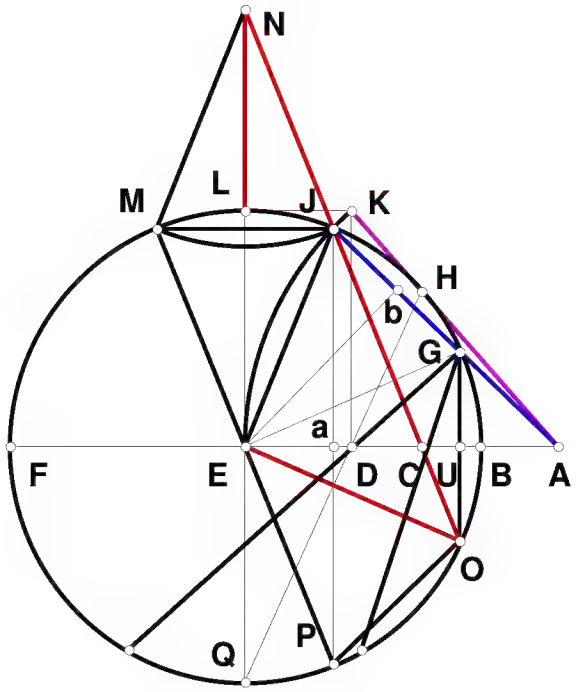
Three Pieces Of Paper

2002



John Clark

Just Another Proof Of Paper 010202



$N := 7 \quad AB := 1 \quad AF := AB \cdot N$

$BF := AF - AB \quad BE := \frac{BF}{2} \quad AE := BE + AB$

$AJ := AE \quad EJ := BE \quad Ea := \frac{EJ^2 + AE^2 - AJ^2}{2 \cdot AE}$

$Gb := Ea \quad GJ := 2 \cdot Gb \quad AG := AJ - GJ$

$Aa := AE - Ea \quad AU := \frac{Aa \cdot AG}{AJ}$

$Ja := \sqrt{AJ^2 - Aa^2} \quad GU := \frac{Ja \cdot AG}{AJ}$

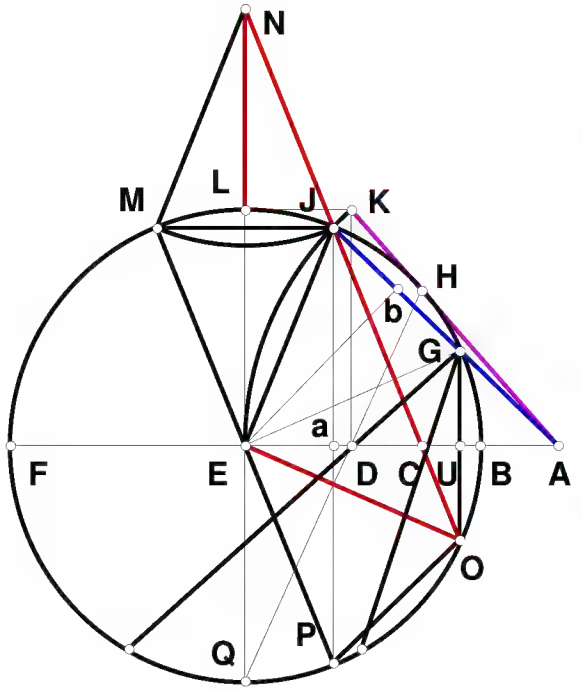
$Ua := Aa - AU \quad JO := \sqrt{Ua^2 + (GU + Ja)^2}$

$JN := \frac{JO \cdot Ea}{Ua} \quad JN - BE = 0$

From 4/29/94 $OP := \sqrt{Ja^2 - 2 \cdot Ja \cdot GU + GU^2 + Ua^2}$

$OP - 2 \cdot Ea = 0 \quad NO := JO + JN \quad EU := Ua + Ea \quad EN := \sqrt{NO^2 - EU^2} \quad EL := BE \quad LN := EN - EL$

Some Algebraic Names;



$$N - 1 - BF = 0 \qquad \frac{N-1}{2} - BE = 0$$

$$\frac{N+1}{2} - AE = 0 \qquad \frac{(N-1)^2}{4\cdot(N+1)} - Ea = 0$$

$$\frac{(N-1)^2}{2\cdot(N+1)} - GJ = 0 \qquad \frac{N^2+6\cdot N+1}{4\cdot(N+1)} - Aa = 0$$

$$\frac{2\cdot N}{N+1} - AG = 0 \qquad \frac{N\cdot\left(N^2+6\cdot N+1\right)}{(N+1)^3} - AU = 0$$

$$\frac{(N-1)\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}}{4\cdot(N+1)} - Ja = 0$$

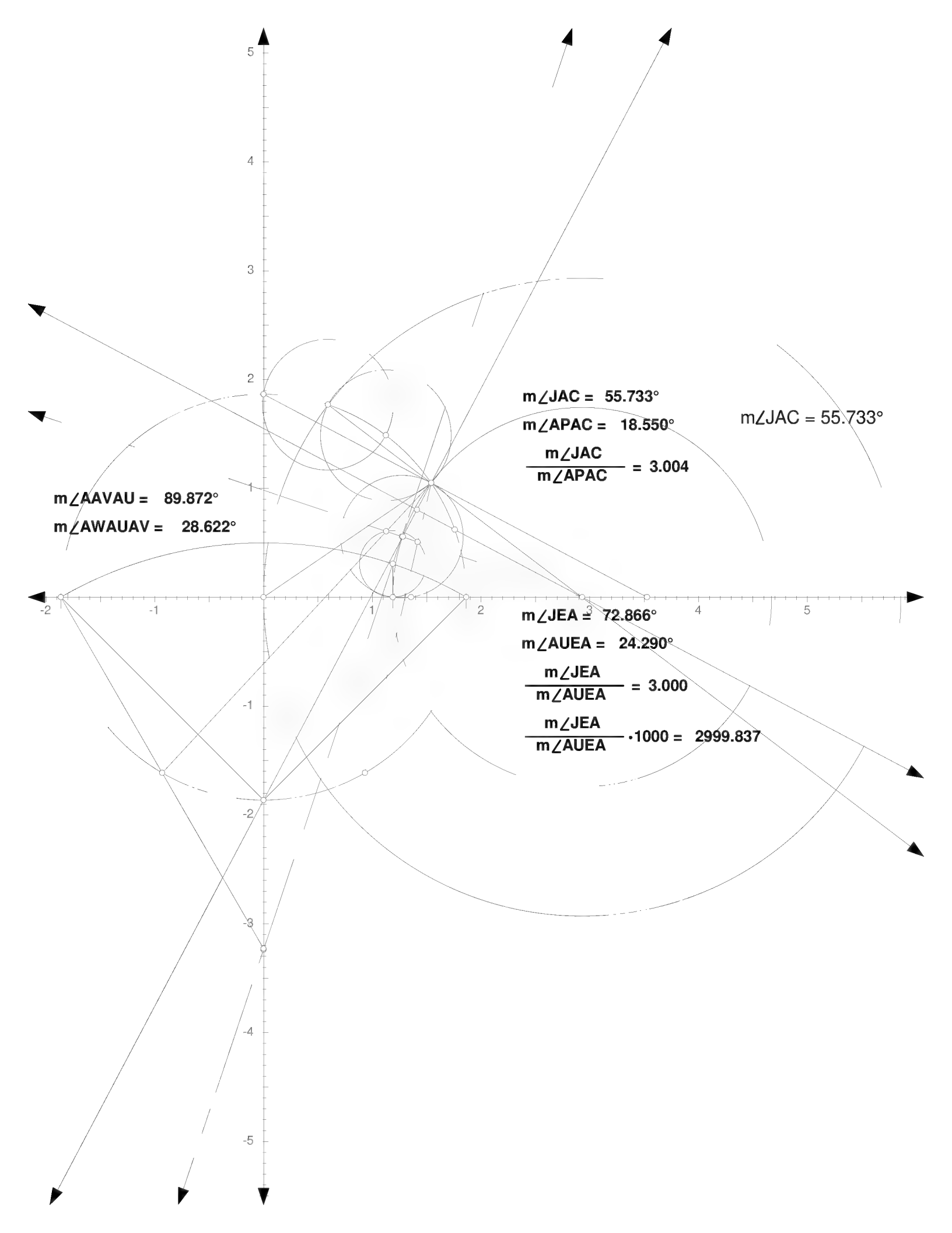
$$\frac{N\cdot(N-1)\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}}{(N+1)^3} - GU = 0$$

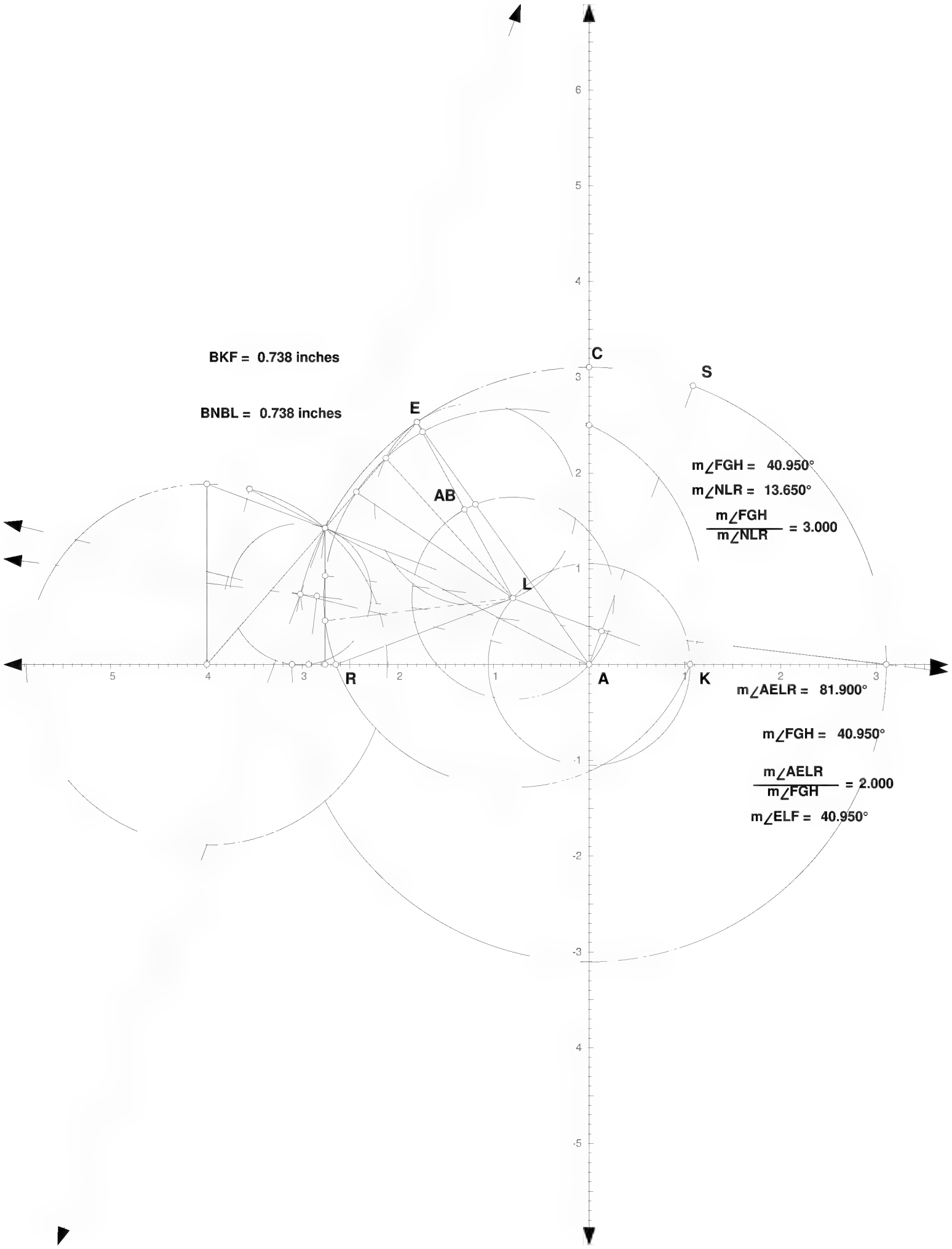
$$\frac{\left(N^2+6\cdot N+1\right)\cdot(N-1)^2}{4\cdot(N+1)^3} - Ua = 0 \qquad \frac{(N-1)\cdot\left(N^2+6\cdot N+1\right)}{2\cdot(N+1)^2} - JO = 0 \qquad \frac{N-1}{2} - JN = 0$$

$$\frac{(N-1)^2}{2\cdot(N+1)} - OP = 0 \qquad \frac{(N-1)\cdot\left(N^2+4\cdot N+1\right)}{(N+1)^2} - NO = 0 \qquad \frac{(N-1)^2\cdot\left(N^2+4\cdot N+1\right)}{2\cdot(N+1)^3} - EU = 0$$

$$\frac{(N-1)\cdot\left(N^2+4\cdot N+1\right)\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}}{2\cdot(N+1)^3} - EN = 0$$

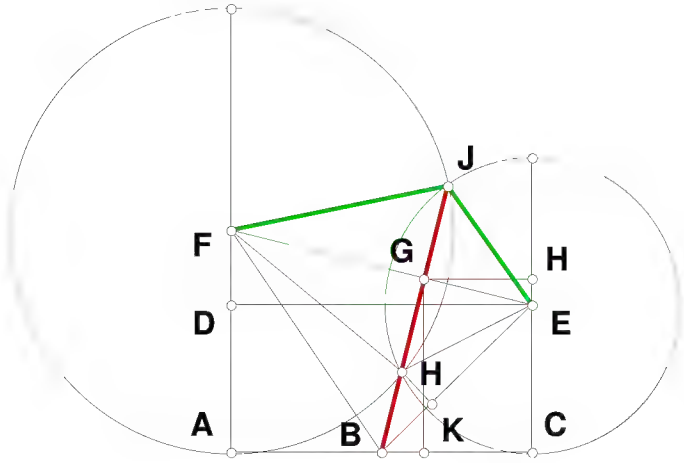
$$\frac{(N-1)\cdot\left(N^2+4\cdot N+1\right)\cdot\sqrt{(N+3)\cdot(3\cdot N+1)}}{2\cdot(N+1)^3} - \frac{N-1}{2} - LN = 0$$


m∠JAC = 55.733°
m∠APAC = 18.550°
m∠JAC / m∠APAC = 3.004
m∠AAVAU = 89.872°
m∠AWAUAV = 28.622°
m∠JEA = 72.866°
m∠AUEA = 24.290°
m∠JEA / m∠AUEA = 3.000
m∠JEA / m∠AUEA ·1000 = 2999.837
m∠JAC = 55.733°


BKF = 0.738 inches
BNBL = 0.738 inches
C
S
E
AB
L
R
A
K
m∠FGH = 40.950°
m∠NLR = 13.650°
m∠FGH / m∠NLR = 3.000
m∠AELR = 81.900°
m∠FGH = 40.950°
m∠AELR / m∠FGH = 2.000
m∠ELF = 40.950°

Easy Power-Line 06_20_02

For any two intersecting circles, the power-line BJ intersects their common tangents AC at midpoint.



$AC := 5 \qquad AF := 4$

$CE := 3 \qquad FH := AF \quad EH := CE$

$AD := CE \quad DF := AF - AD$

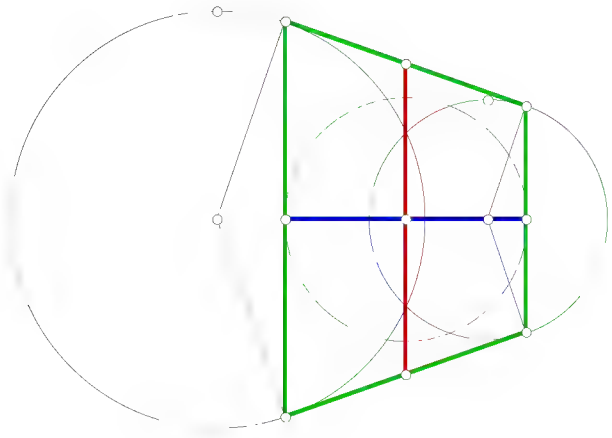
$EJ := CE \quad FJ := AF$

$DE := AC \quad EF := \sqrt{DF^2 + DE^2}$

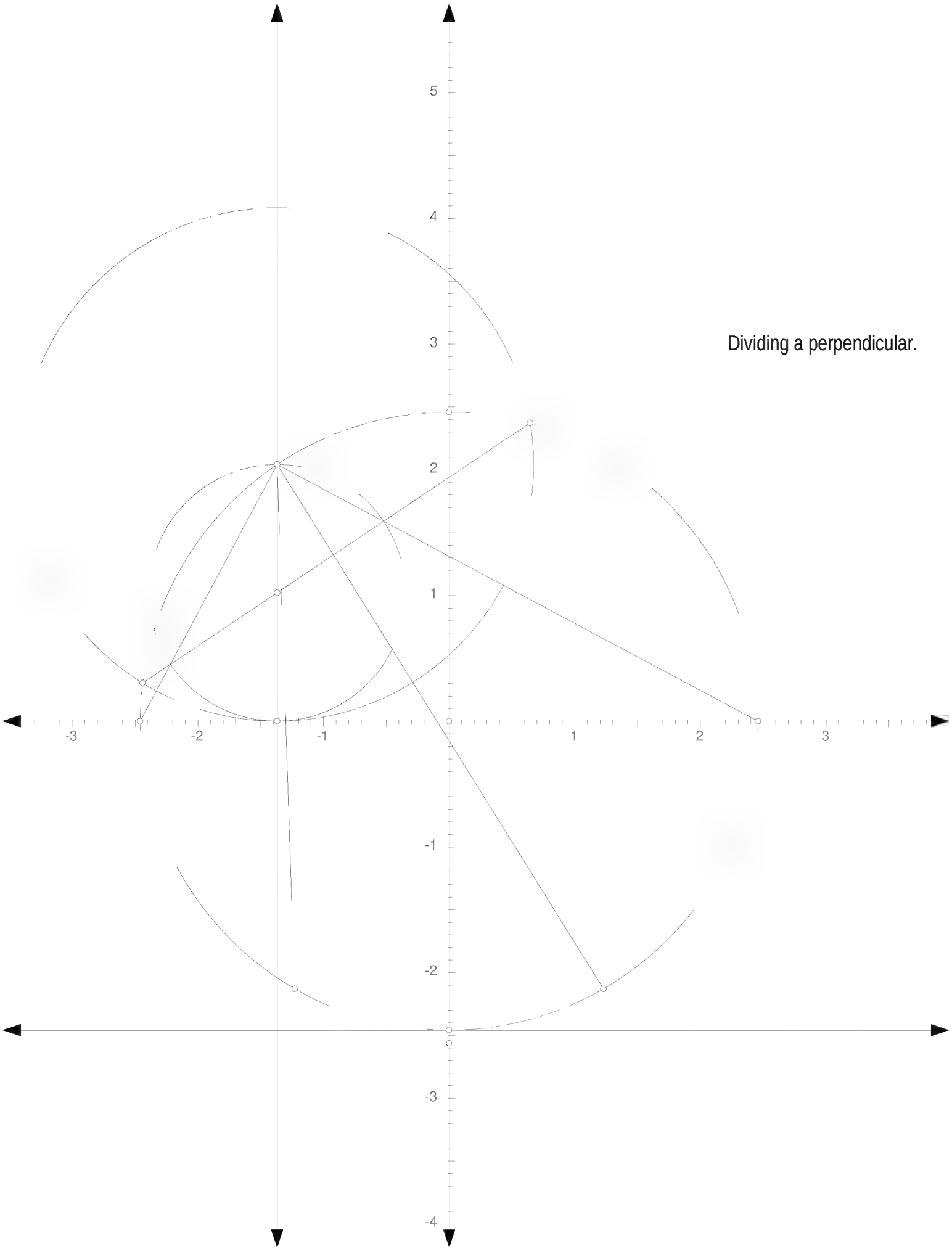
$EG := \dfrac{EJ^2 + EF^2 - FJ^2}{2 \cdot EF}$

$EH := \dfrac{DF \cdot EG}{EF} \quad CH := CE + EH \quad GH := \dfrac{DE \cdot EG}{EF} \quad CK := GH \quad KG := CH \quad BK := \dfrac{DF \cdot KG}{DE} \quad BC := CK + BK$

$BC - \dfrac{AC}{2} = 0$



The power line is the line upon which lays a segment between the two midpoints on the two tangents of two given circles or between a point and a circle.
The intersection of two circles lays halfway between their two tangents.
A power plane lays between two spheres or a sphere and a point.

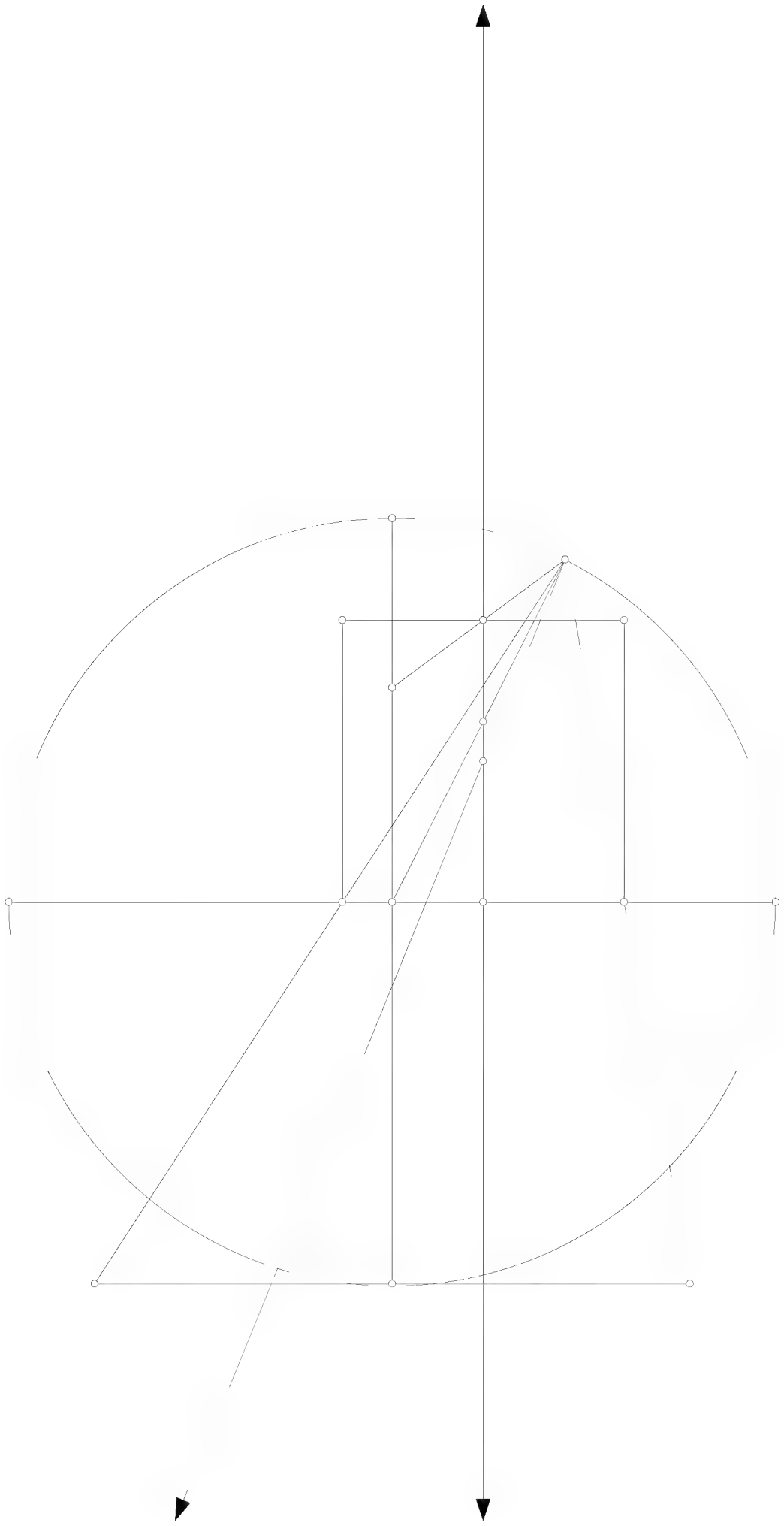


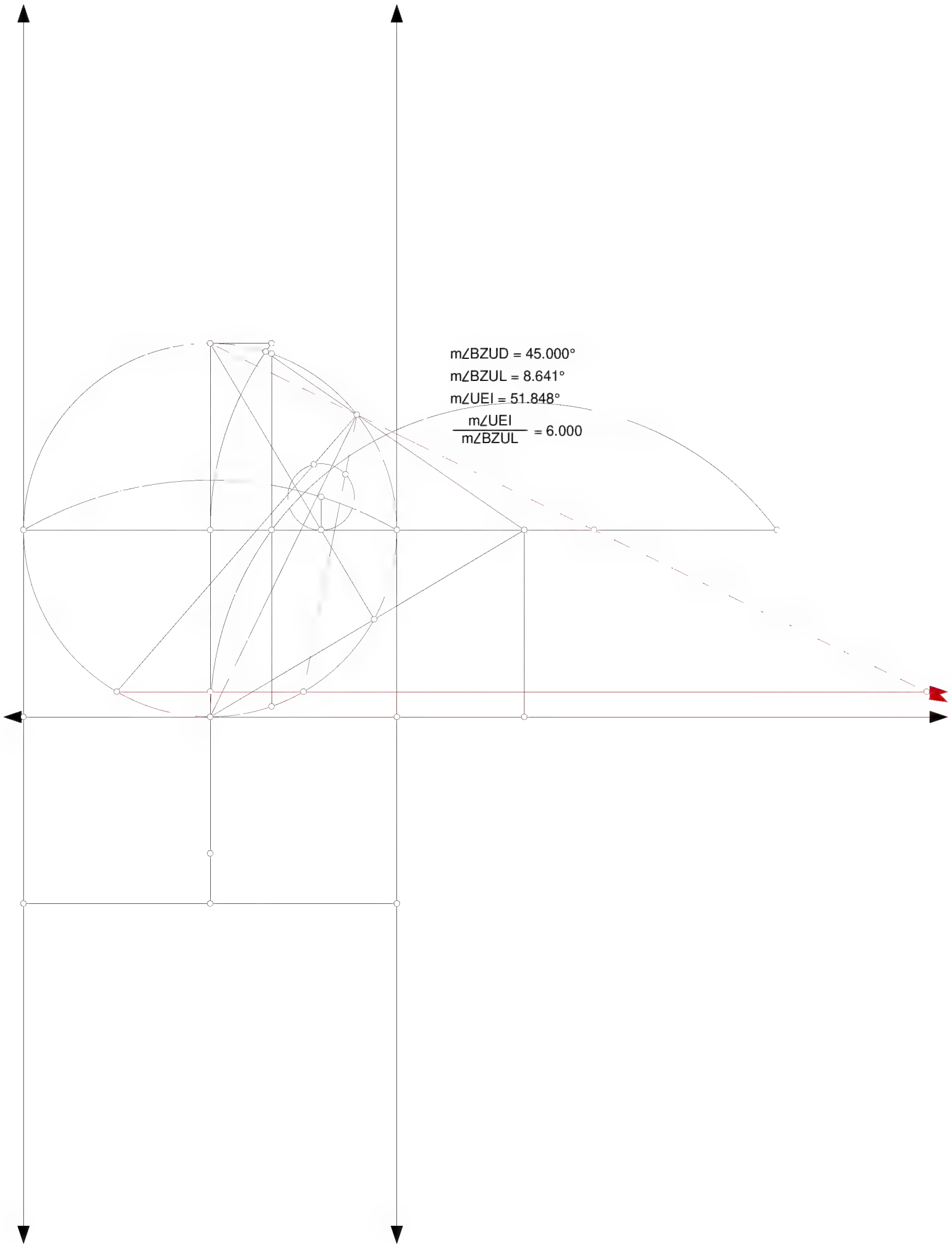
Dividing a perpendicular.

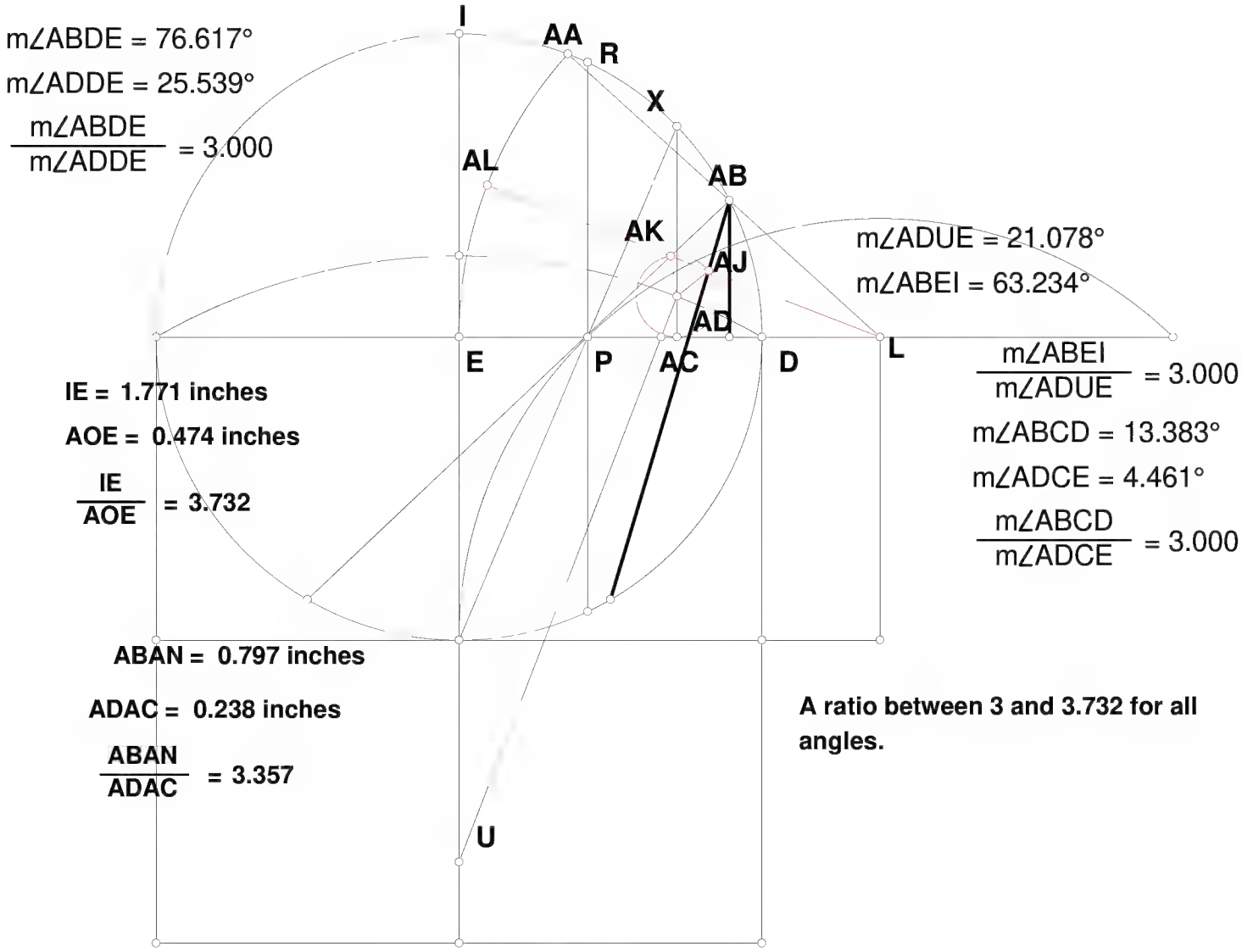
ZX = 1.951 inches

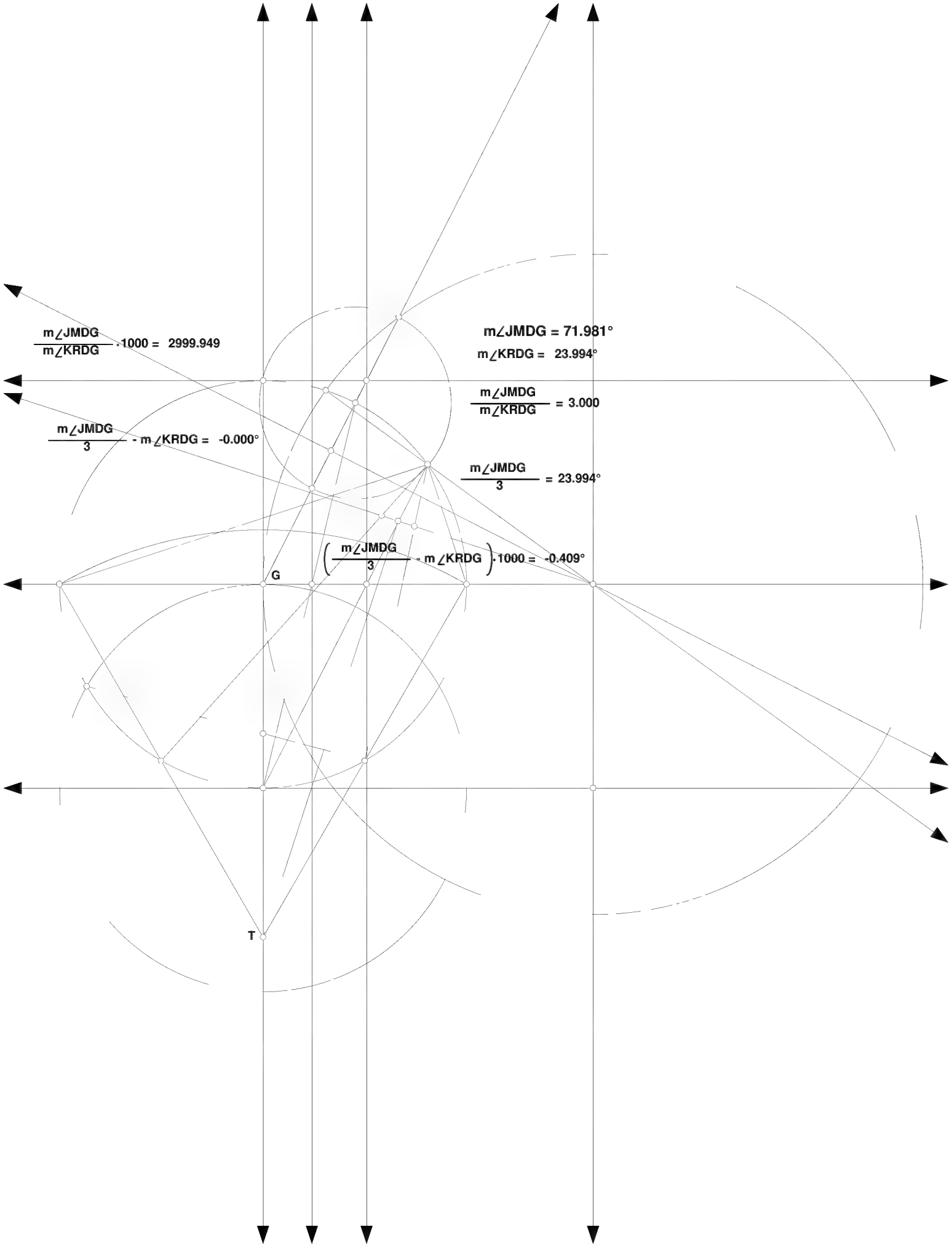
ABX = 0.702 inches

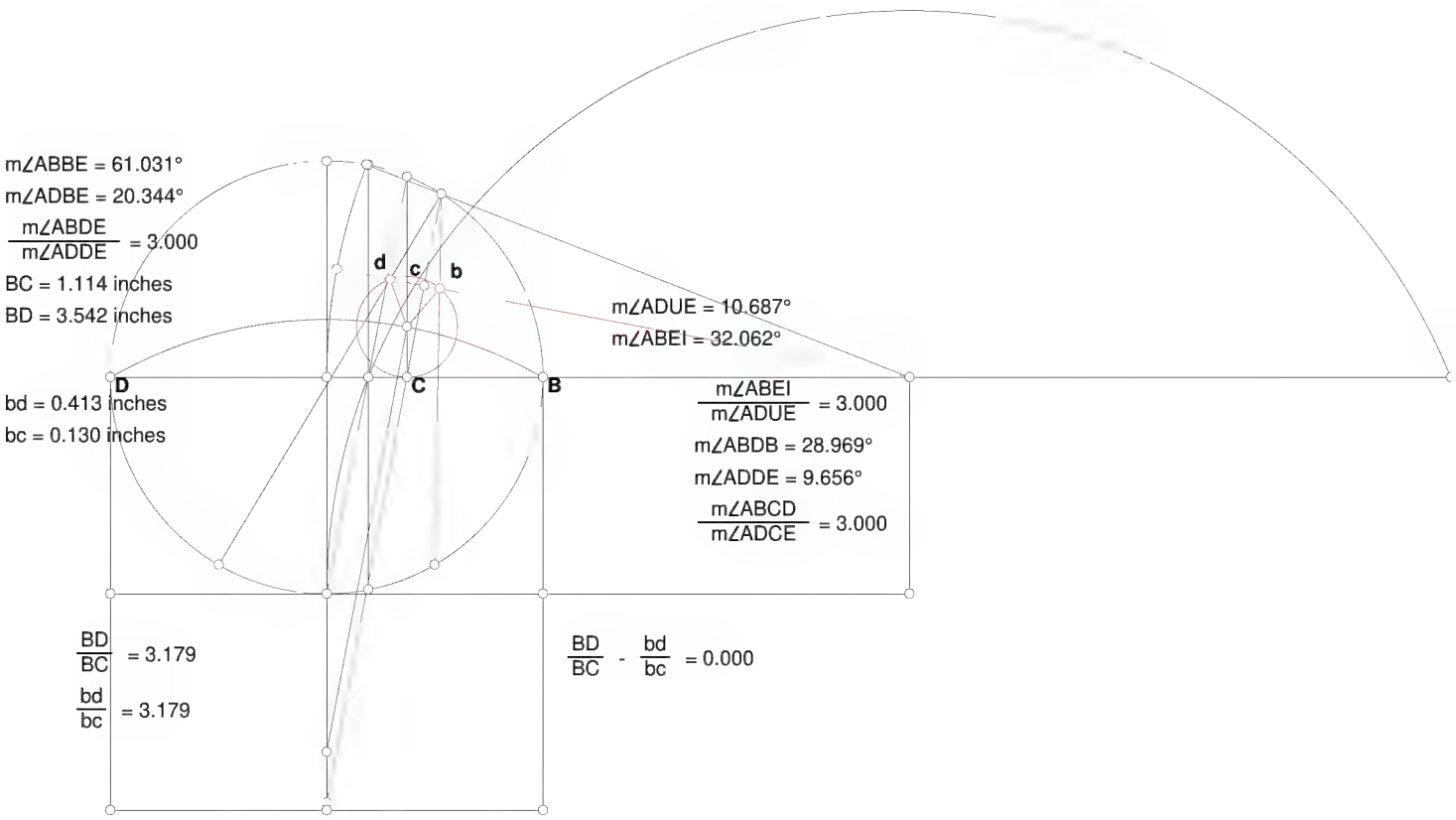
$$\frac{ZX}{ABX} = 2.780$$

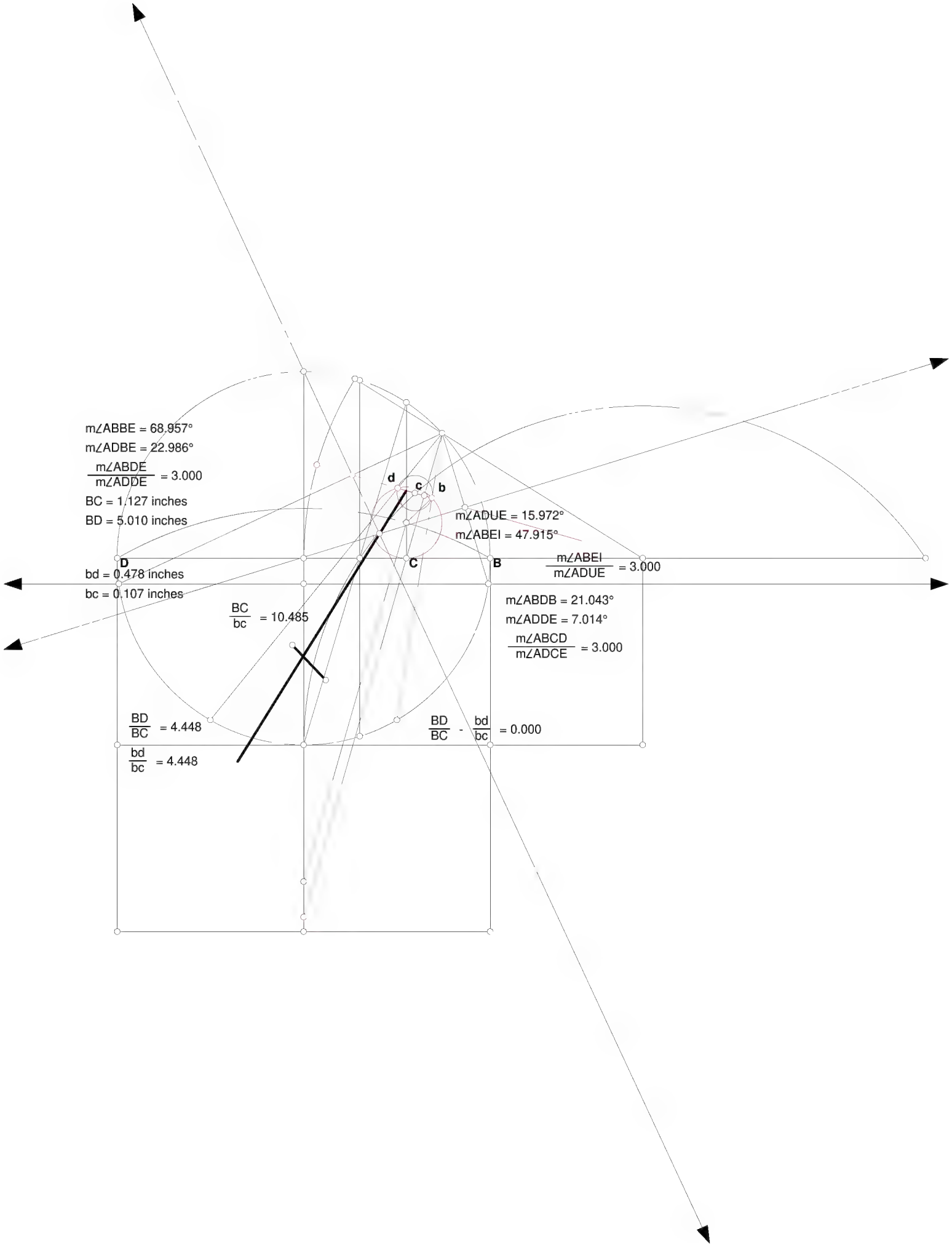


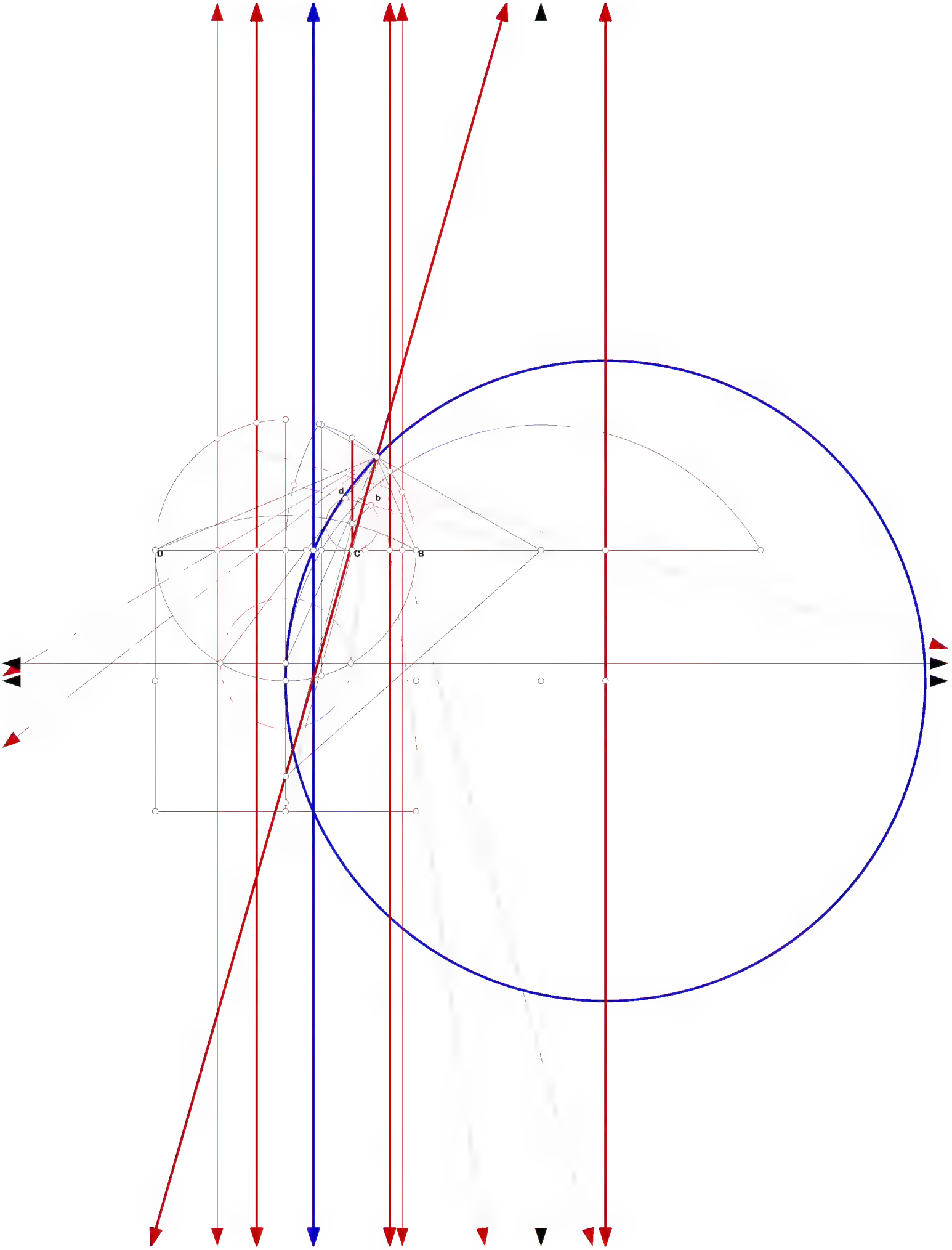

m∠BZUD = 45.000°
m∠BZUL = 8.641°
m∠UEI = 51.848°
m∠UEI / m∠BZUL = 6.000


I
AA
R
X
AL
AB
AK
AJ
AD
E
P
AC
D
L
U
m∠ABDE = 76.617°
m∠ADDE = 25.539°
m∠ABDE / m∠ADDE = 3.000
m∠ADUE = 21.078°
m∠ABEI = 63.234°
m∠ABEI / m∠ADUE = 3.000
m∠ABCD = 13.383°
m∠ADCE = 4.461°
m∠ABCD / m∠ADCE = 3.000
IE = 1.771 inches
AOE = 0.474 inches
IE / AOE = 3.732
ABAN = 0.797 inches
ADAC = 0.238 inches
ABAN / ADAC = 3.357
A ratio between 3 and 3.732 for all angles.

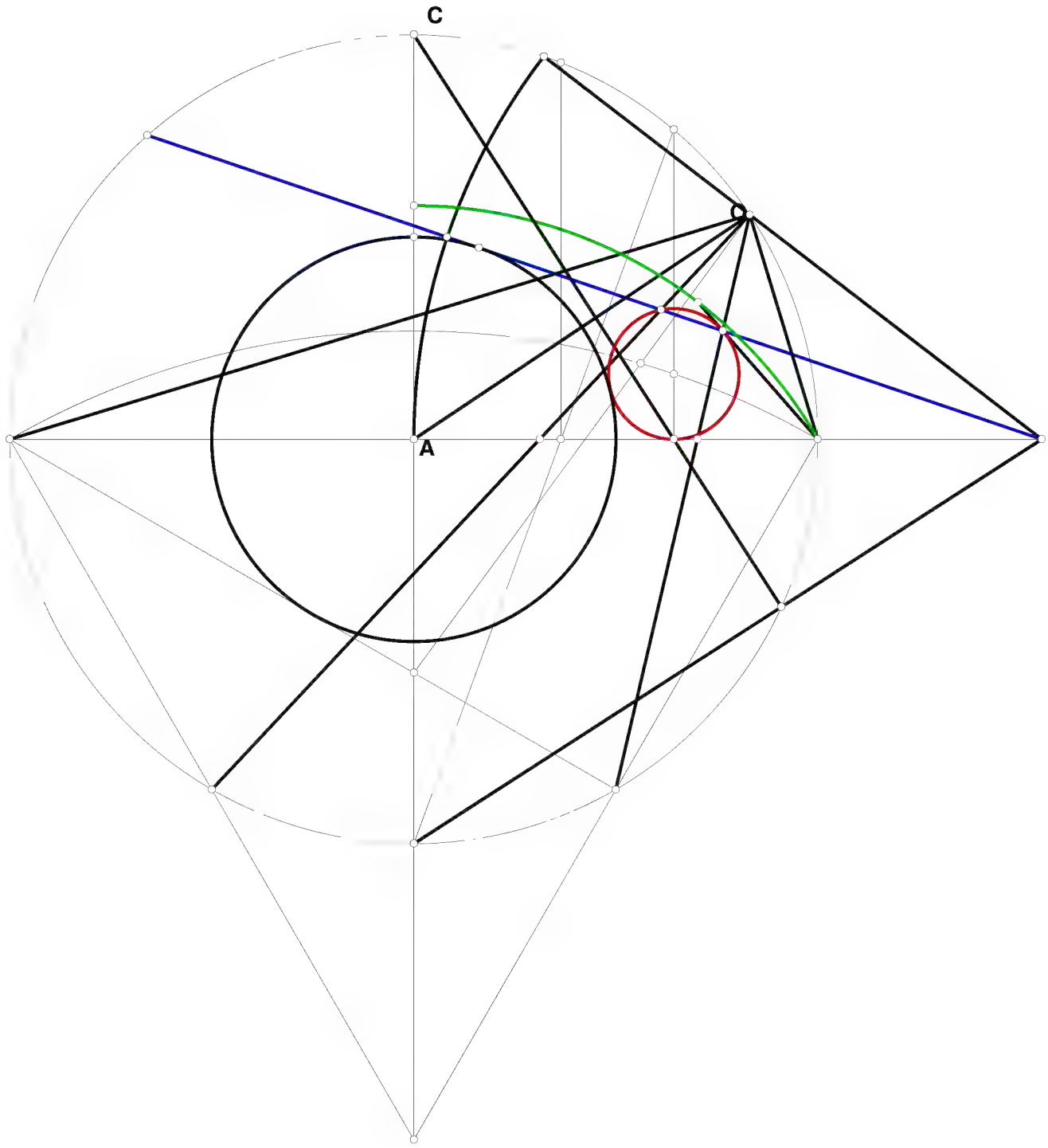

$\frac{m\angle JMDG}{m\angle KRDG} \cdot 1000 = 2999.949$
$m\angle JMDG = 71.981°$
$m\angle KRDG = 23.994°$
$\frac{m\angle JMDG}{m\angle KRDG} = 3.000$
$\frac{m\angle JMDG}{3} - m\angle KRDG = -0.000°$
$\frac{m\angle JMDG}{3} = 23.994°$
$\left(\frac{m\angle JMDG}{3} - m\angle KRDG\right) \cdot 1000 = -0.409°$
G
T


m∠ABBE = 61.031°
m∠ADBE = 20.344°
m∠ABDE / m∠ADDE = 3.000
BC = 1.114 inches
BD = 3.542 inches
bd = 0.413 inches
bc = 0.130 inches
d
c
b
D
C
B
m∠ADUE = 10.687°
m∠ABEI = 32.062°
m∠ABEI / m∠ADUE = 3.000
m∠ABDB = 28.969°
m∠ADDE = 9.656°
m∠ABCD / m∠ADCE = 3.000
BD / BC = 3.179
bd / bc = 3.179
BD / BC - bd / bc = 0.000


m∠ABBE = 68.957°
m∠ADBE = 22.986°
m∠ABDE / m∠ADDE = 3.000
BC = 1.127 inches
BD = 5.010 inches
bd = 0.478 inches
bc = 0.107 inches
BC / bc = 10.485
BD / BC = 4.448
bd / bc = 4.448
BD / BC - bd / bc = 0.000
m∠ADUE = 15.972°
m∠ABEI = 47.915°
m∠ABEI / m∠ADUE = 3.000
m∠ABDB = 21.043°
m∠ADDE = 7.014°
m∠ABCD / m∠ADCE = 3.000
D
C
B
d
c
b


d
b
D
C
B

m∠OKJ = 18.765°

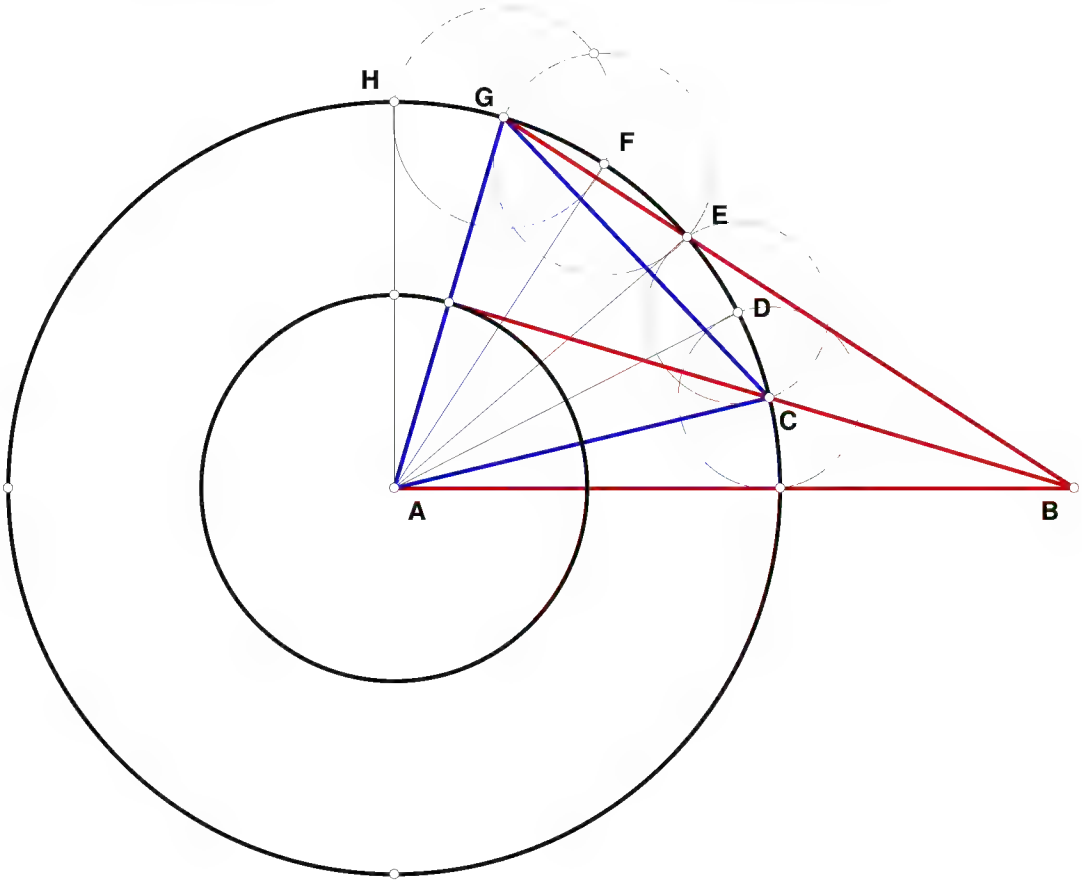


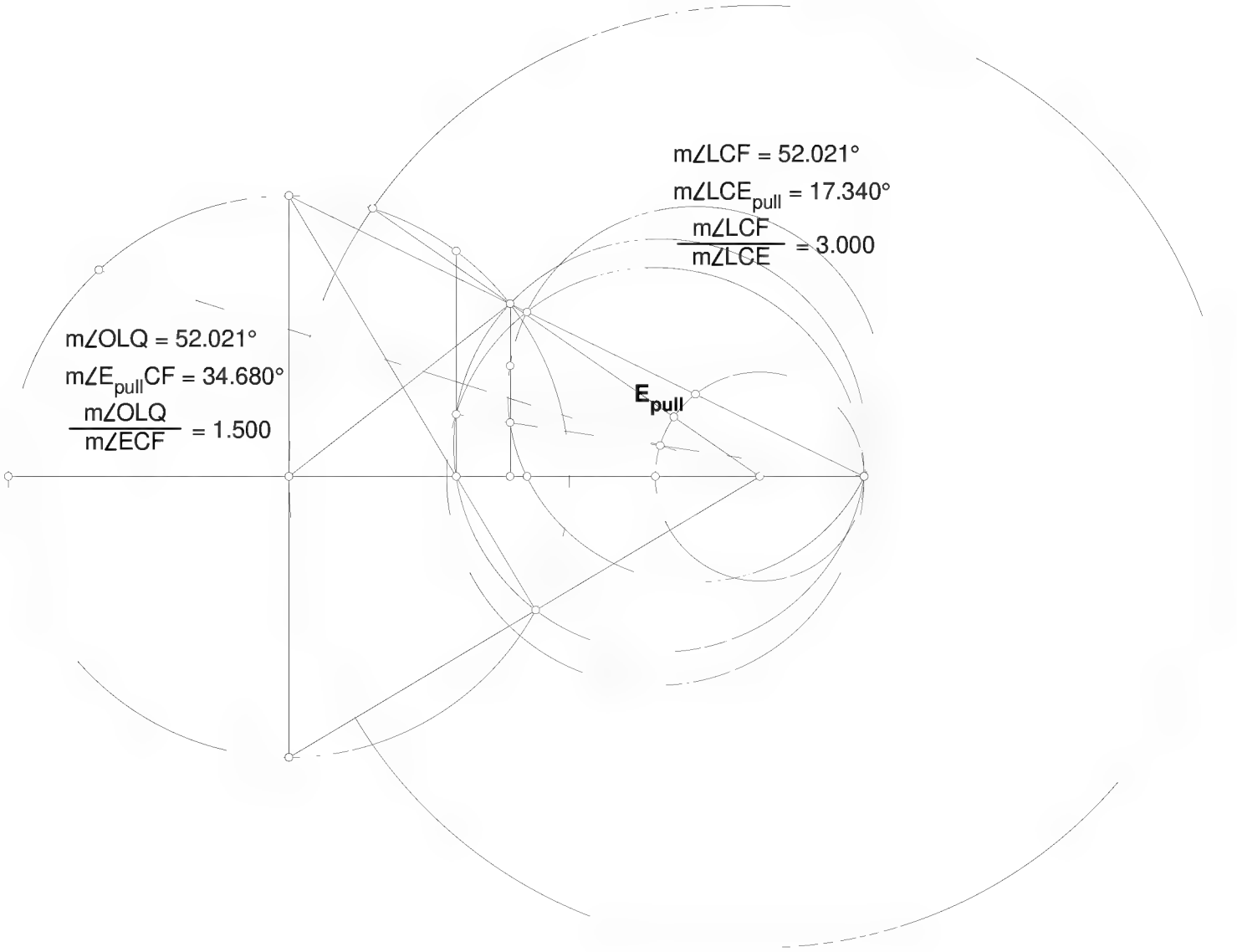
m∠EAH = 49.456°

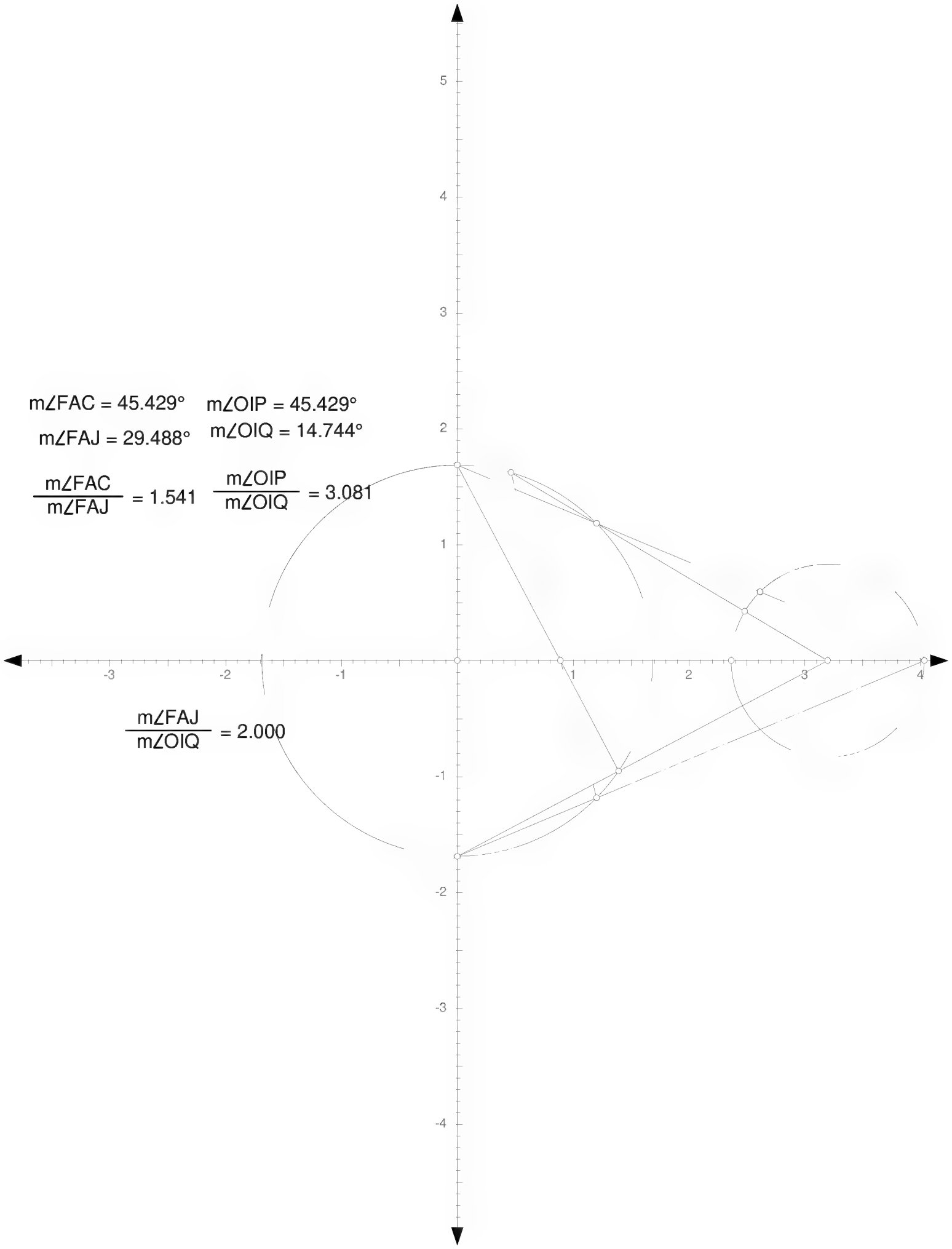
m∠EAH = 49.456°

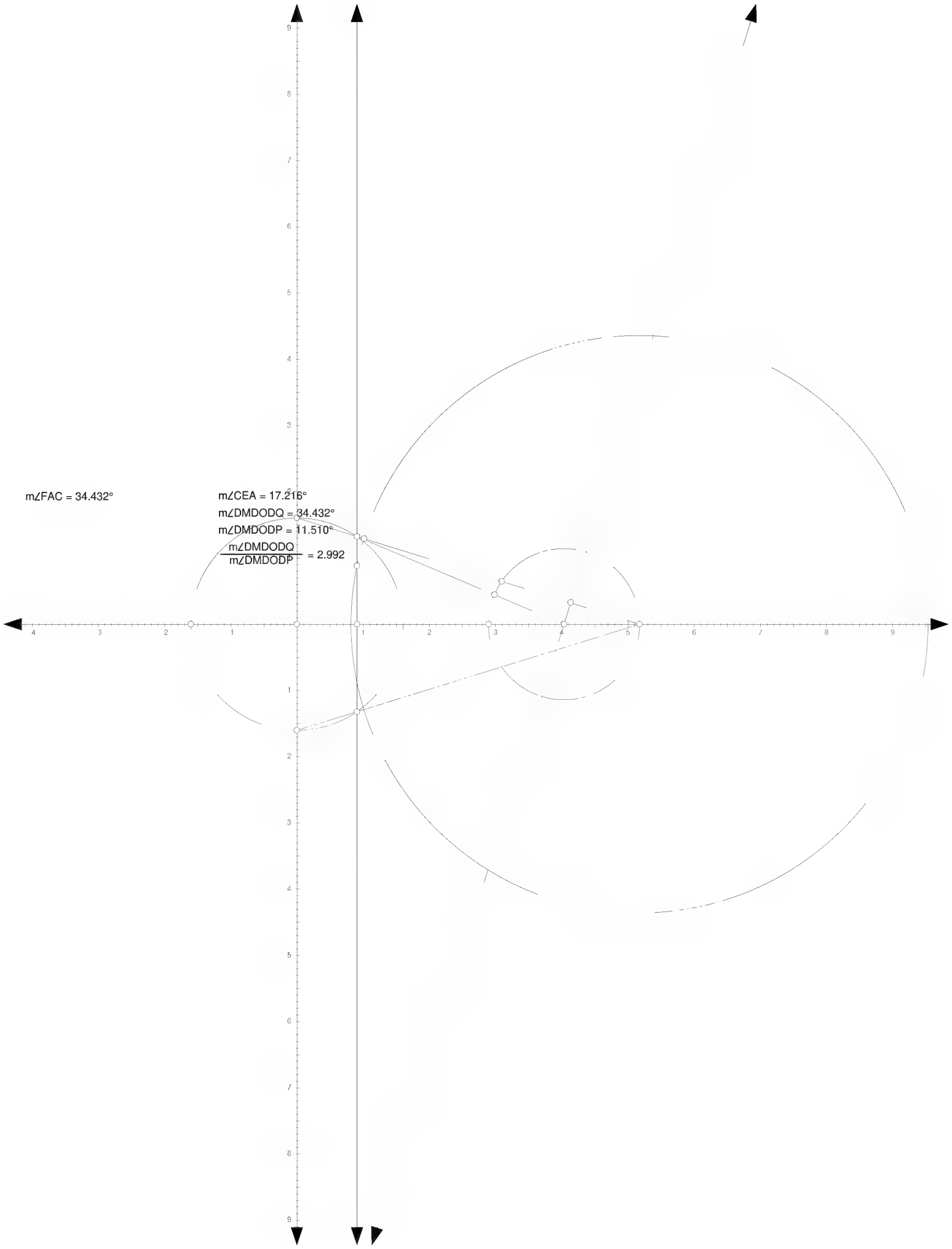
m∠EAH = 40.544°

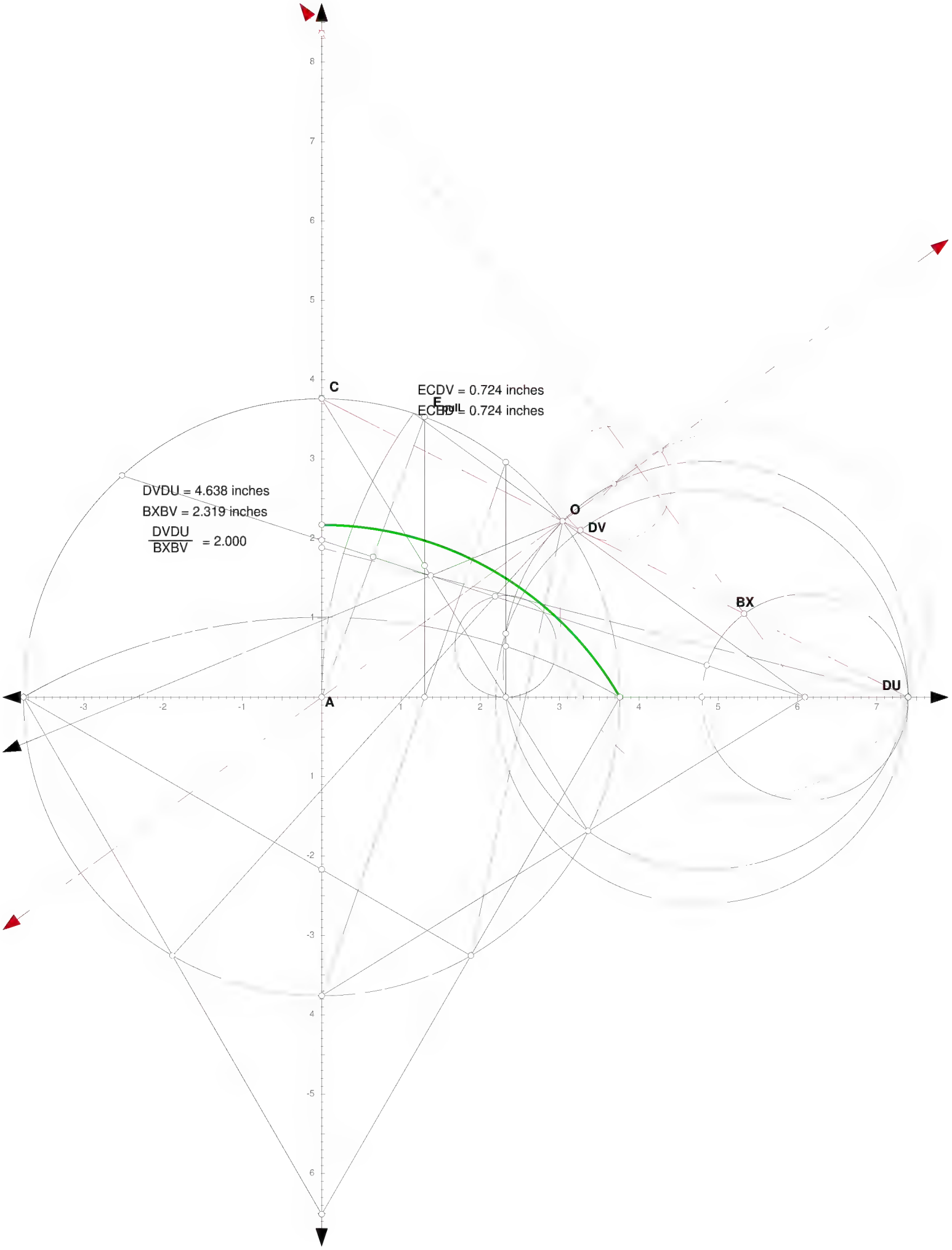
m∠EAH + m∠EAH = 90.000°

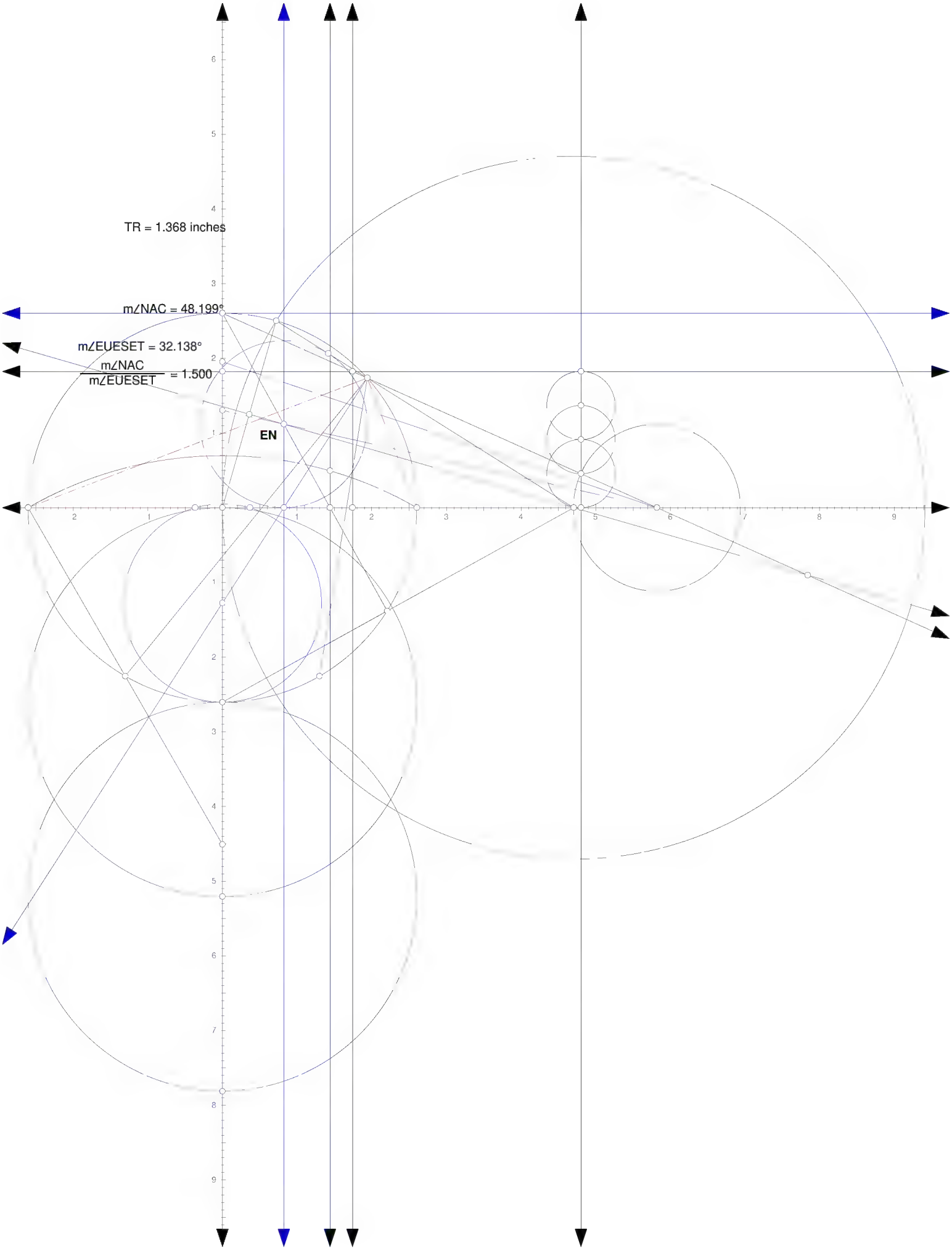


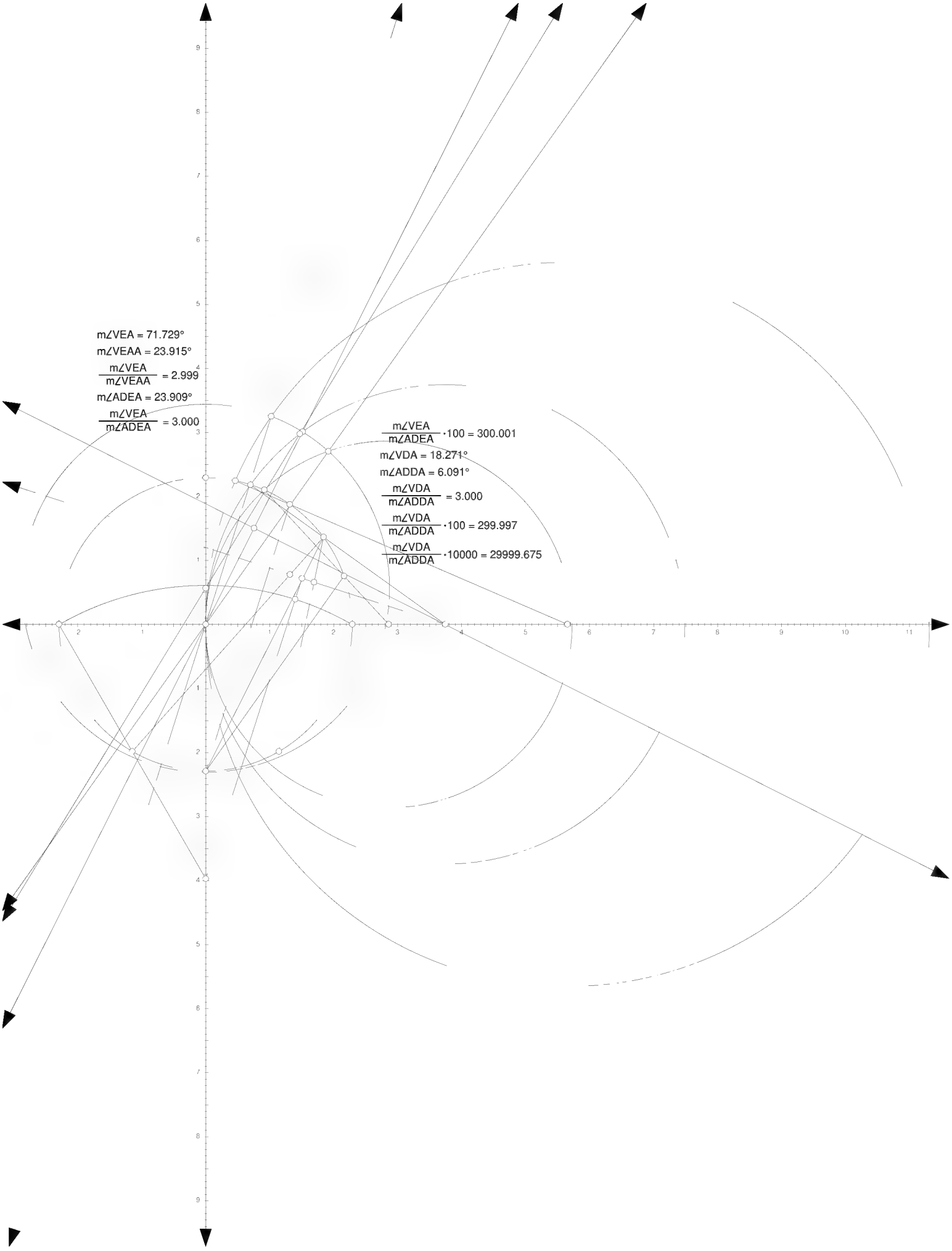

m∠LCF = 52.021°
m∠LCE$_{pull}$ = 17.340°
$\frac{m\angle LCF}{m\angle LCE}$ = 3.000
m∠OLQ = 52.021°
m∠E$_{pull}$CF = 34.680°
$\frac{m\angle OLQ}{m\angle ECF}$ = 1.500
E$_{pull}$

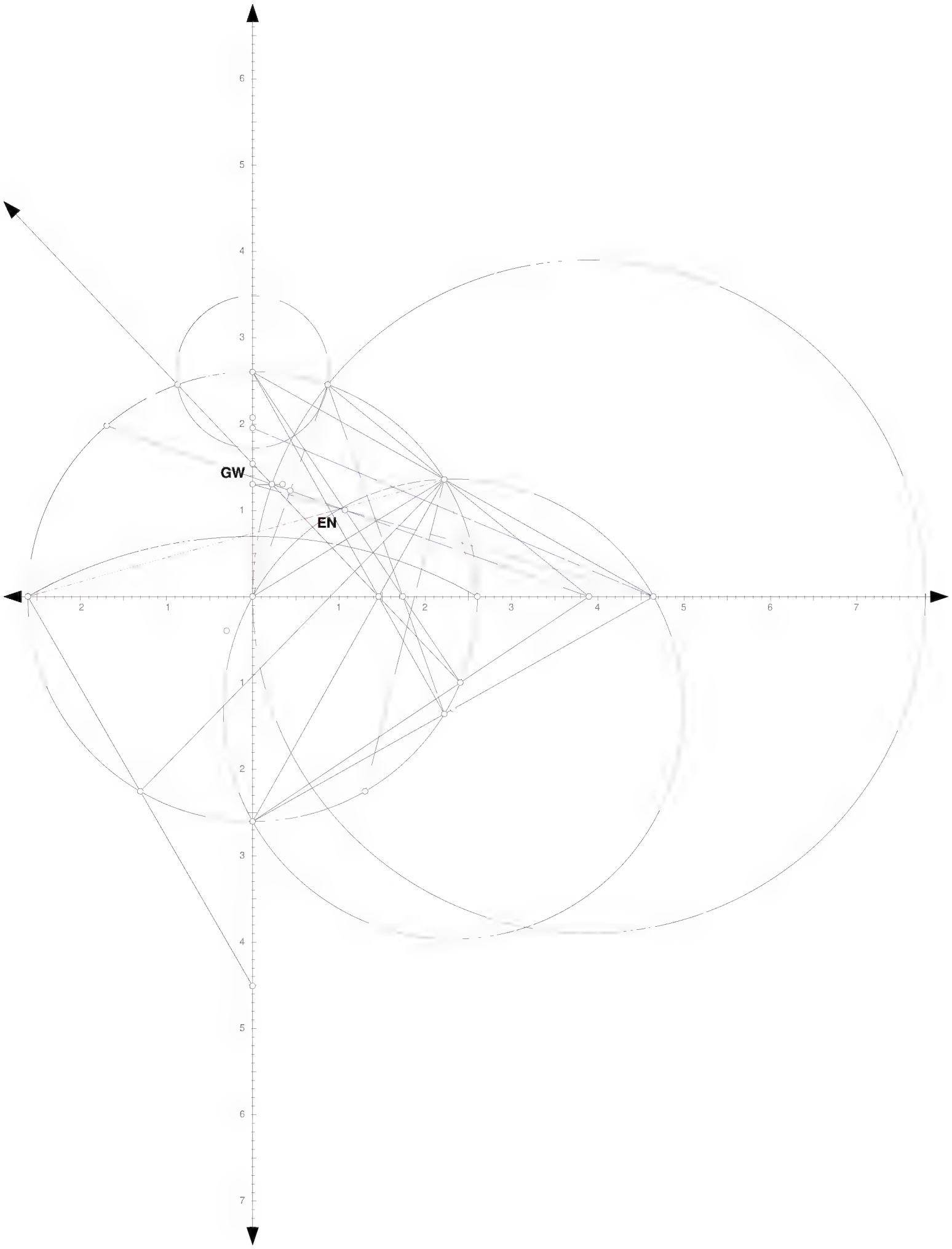

m∠FAC = 45.429°
m∠OIP = 45.429°
m∠FAJ = 29.488°
m∠OIQ = 14.744°
m∠FAC / m∠FAJ = 1.541
m∠OIP / m∠OIQ = 3.081
m∠FAJ / m∠OIQ = 2.000
5
4
3
2
1
-1
-2
-3
-4
-3
-2
-1
1
2
3
4

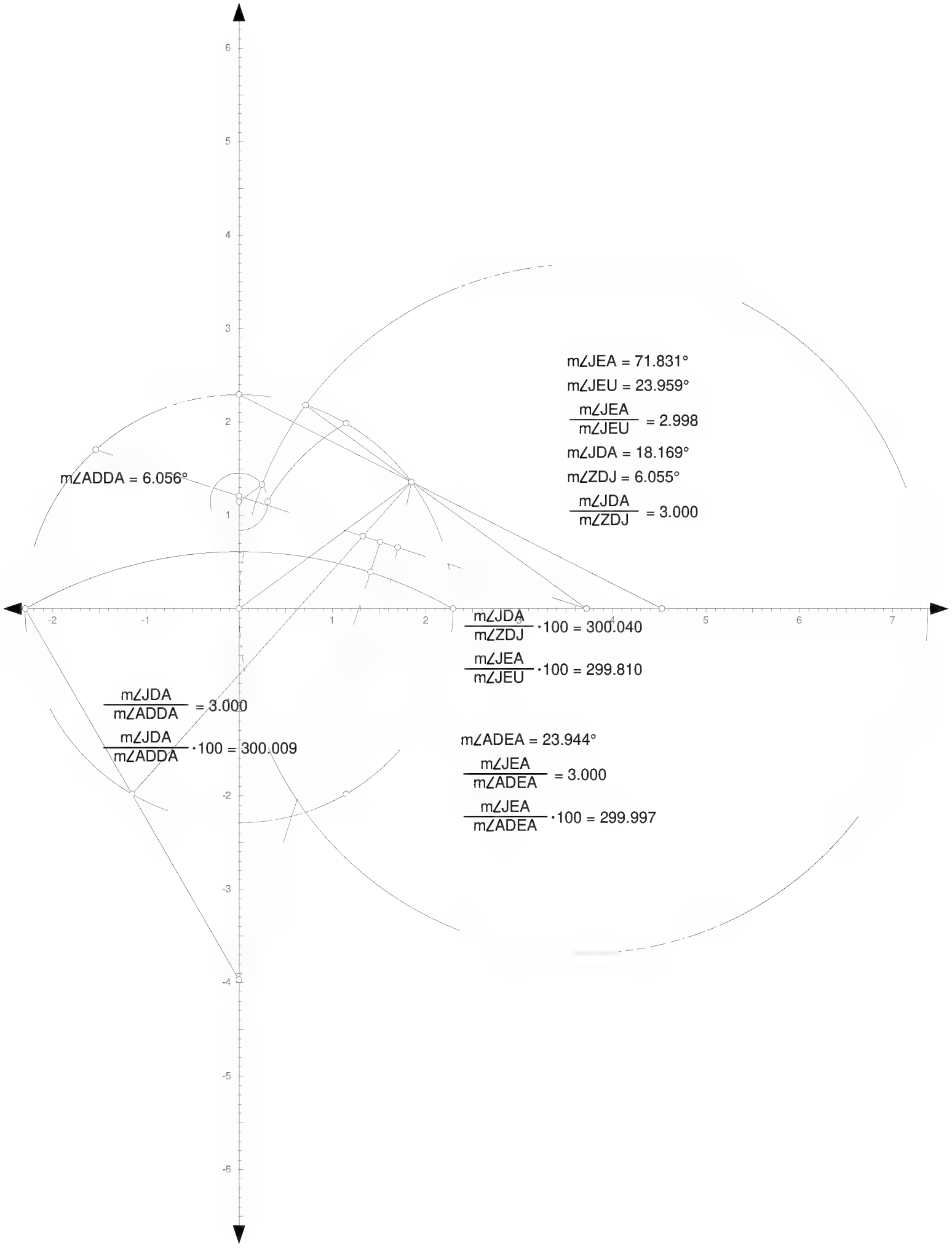

m∠FAC = 34.432°
m∠CEA = 17.216°
m∠DMDODQ = 34.432°
m∠DMDODP = 11.510°
m∠DMDODQ / m∠DMDODP = 2.992

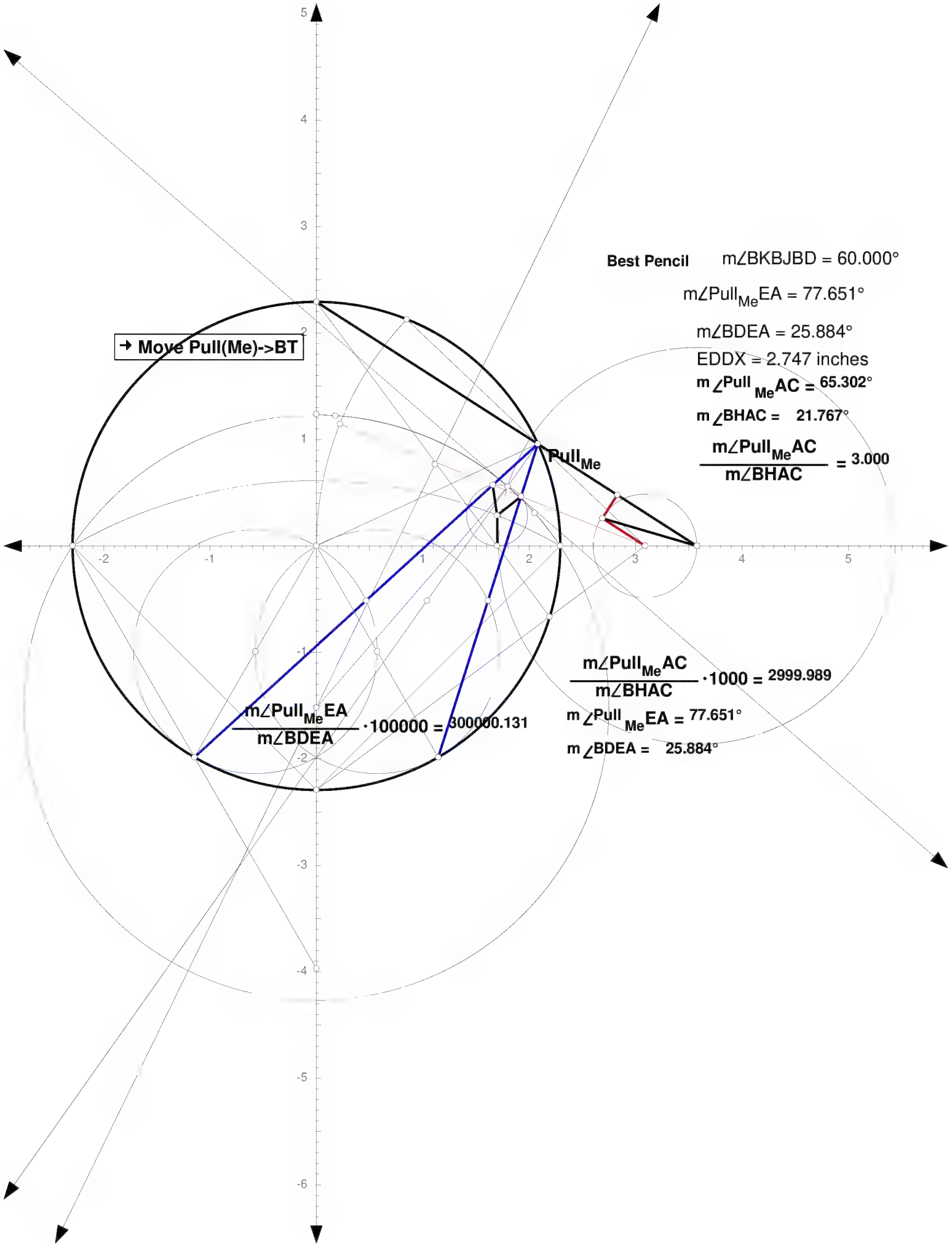

C
ECDV = 0.724 inches
ECBD = 0.724 inches
DVDU = 4.638 inches
BXBV = 2.319 inches
DVDU / BXBV = 2.000
O
DV
BX
DU
A

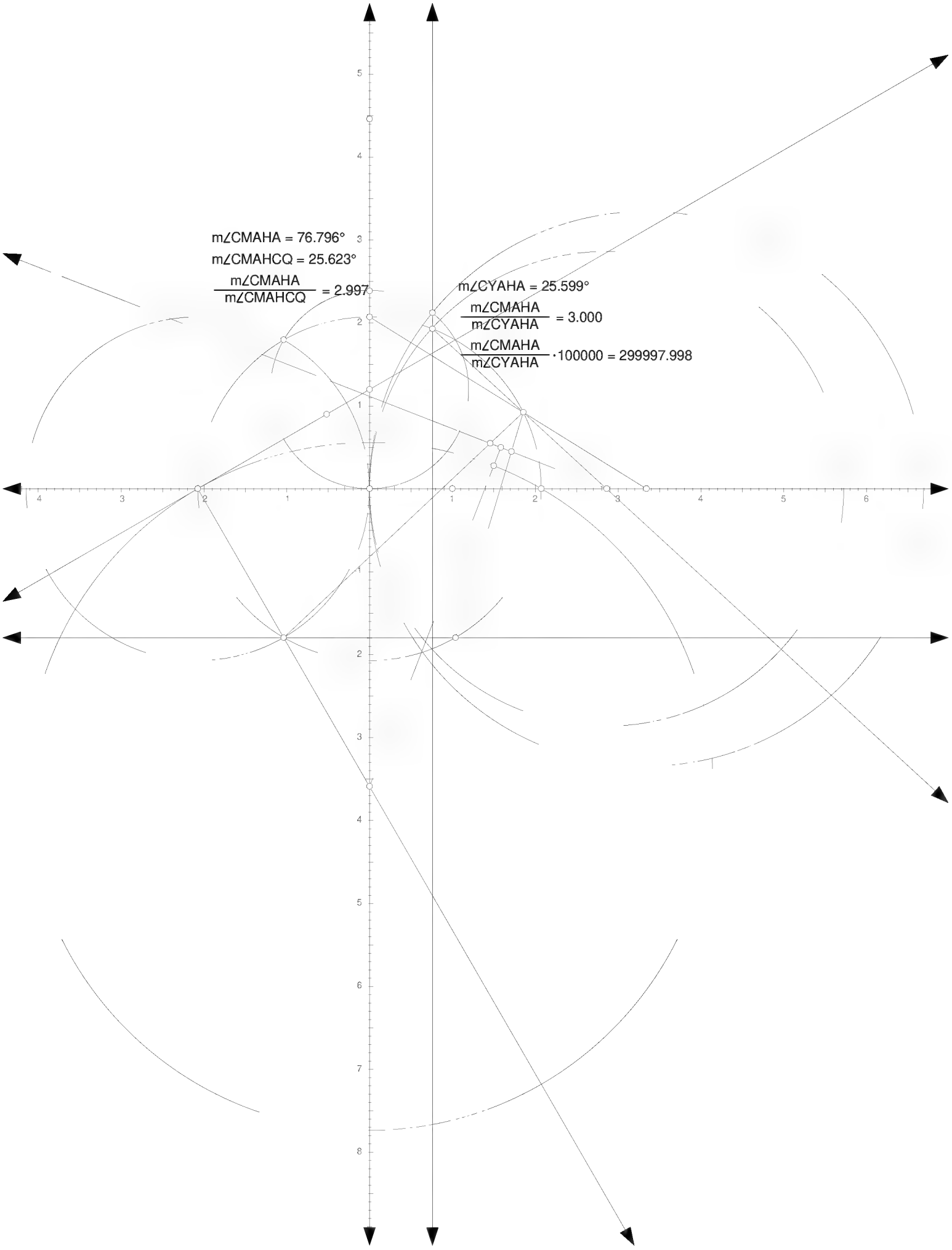

TR = 1.368 inches
m∠NAC = 48.199°
m∠EUESET = 32.138°
m∠NAC / m∠EUESET = 1.500
EN

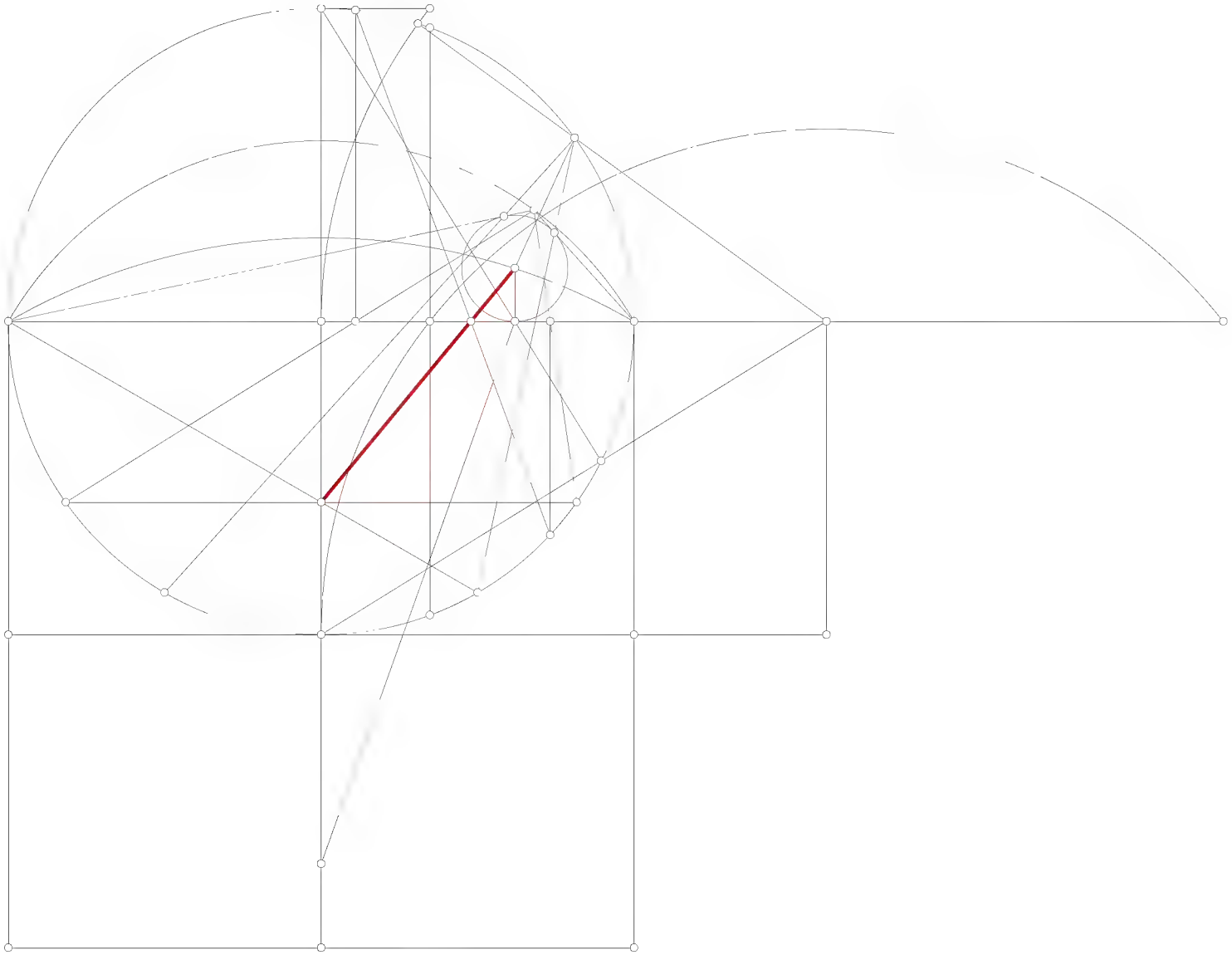

m∠VEA = 71.729°
m∠VEAA = 23.915°
m∠VEA / m∠VEAA = 2.999
m∠ADEA = 23.909°
m∠VEA / m∠ADEA = 3.000
m∠VEA / m∠ADEA ·100 = 300.001
m∠VDA = 18.271°
m∠ADDA = 6.091°
m∠VDA / m∠ADDA = 3.000
m∠VDA / m∠ADDA ·100 = 299.997
m∠VDA / m∠ADDA ·10000 = 29999.675


GW
EN


m∠JEA = 71.831°
m∠JEU = 23.959°
m∠JEA / m∠JEU = 2.998
m∠JDA = 18.169°
m∠ZDJ = 6.055°
m∠JDA / m∠ZDJ = 3.000
m∠ADDA = 6.056°
m∠JDA / m∠ZDJ ·100 = 300.040
m∠JEA / m∠JEU ·100 = 299.810
m∠JDA / m∠ADDA = 3.000
m∠JDA / m∠ADDA ·100 = 300.009
m∠ADEA = 23.944°
m∠JEA / m∠ADEA = 3.000
m∠JEA / m∠ADEA ·100 = 299.997


Best Pencil
m∠BKBJBD = 60.000°
m∠Pull$_{Me}$EA = 77.651°
m∠BDEA = 25.884°
EDDX = 2.747 inches
m∠Pull$_{Me}$AC = 65.302°
m∠BHAC = 21.767°
$\frac{m\angle Pull_{Me}AC}{m\angle BHAC}$ = 3.000
Move Pull(Me)->BT
Pull$_{Me}$
$\frac{m\angle Pull_{Me}EA}{m\angle BDEA} \cdot 100000$ = 300000.131
$\frac{m\angle Pull_{Me}AC}{m\angle BHAC} \cdot 1000$ = 2999.989
m∠Pull$_{Me}$EA = 77.651°
m∠BDEA = 25.884°


m∠CMAHA = 76.796°
m∠CMAHCQ = 25.623°
m∠CMAHA / m∠CMAHCQ = 2.997
m∠CYAHA = 25.599°
m∠CMAHA / m∠CYAHA = 3.000
m∠CMAHA / m∠CYAHA · 100000 = 299997.998



m∠FVFUBV = 18.895°

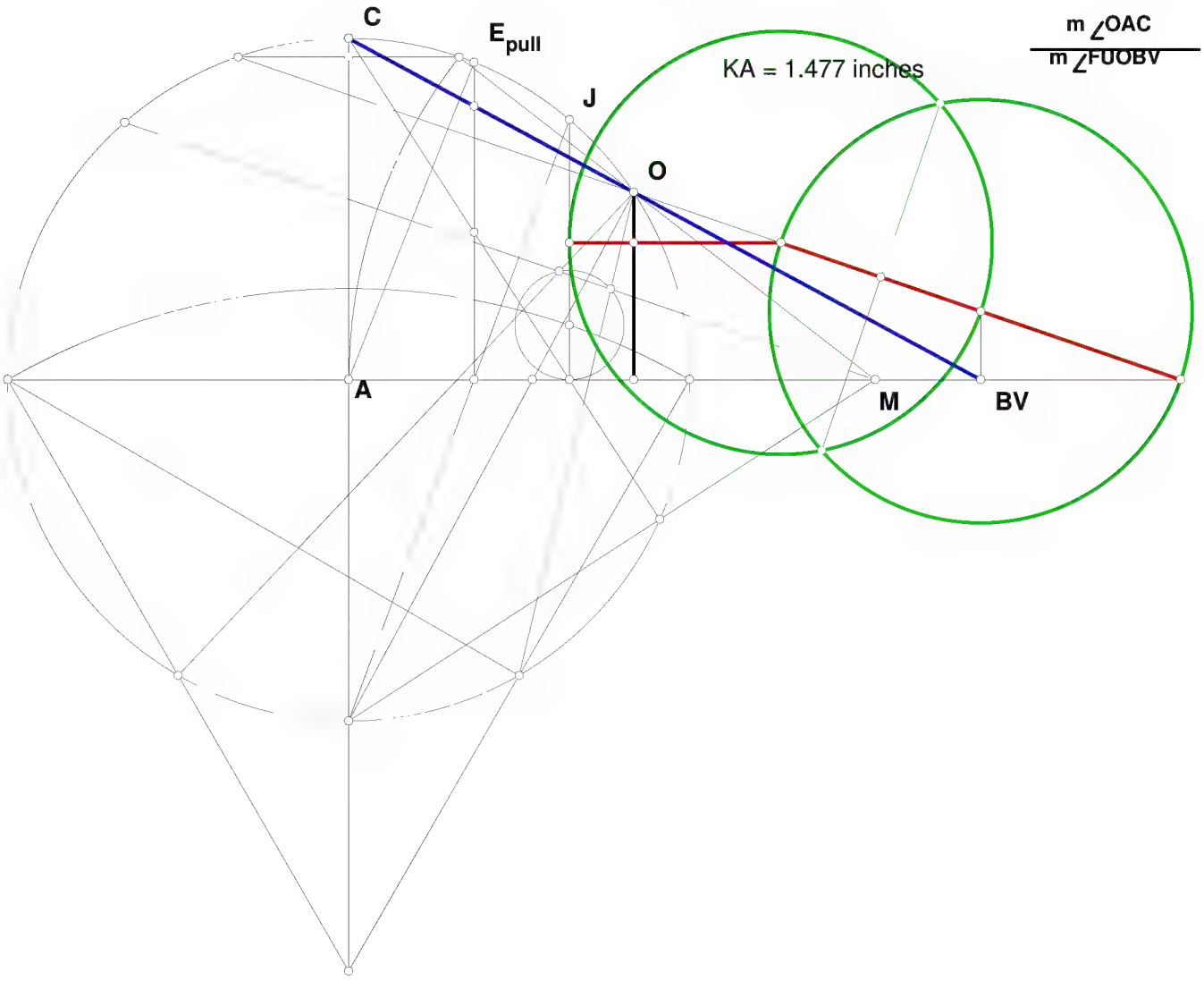
m∠OAC = 56.685°

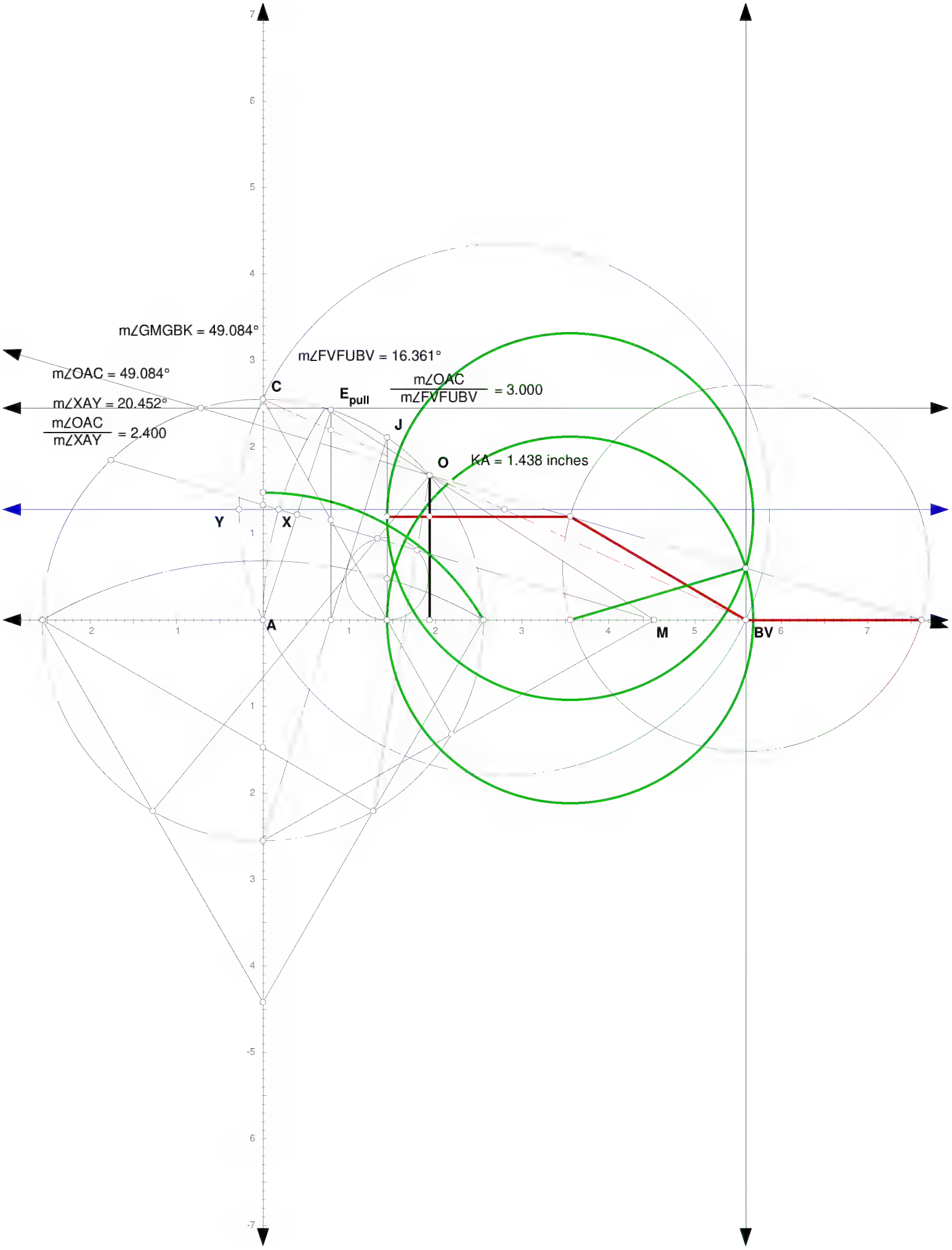
$\frac{m\angle OAC}{m\angle FVFUBV} = 3.000$

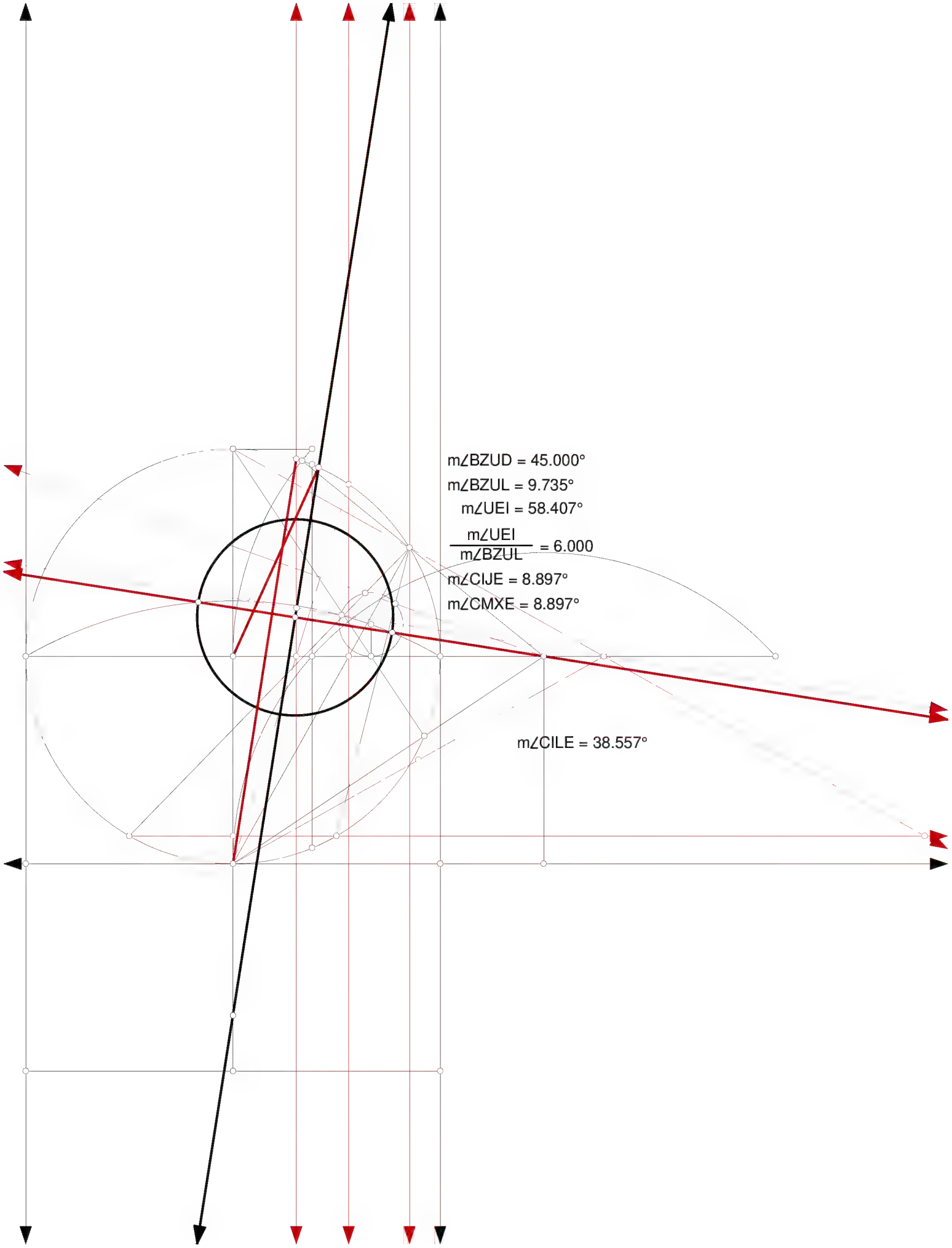
m ∠FUOBV = 9.447°

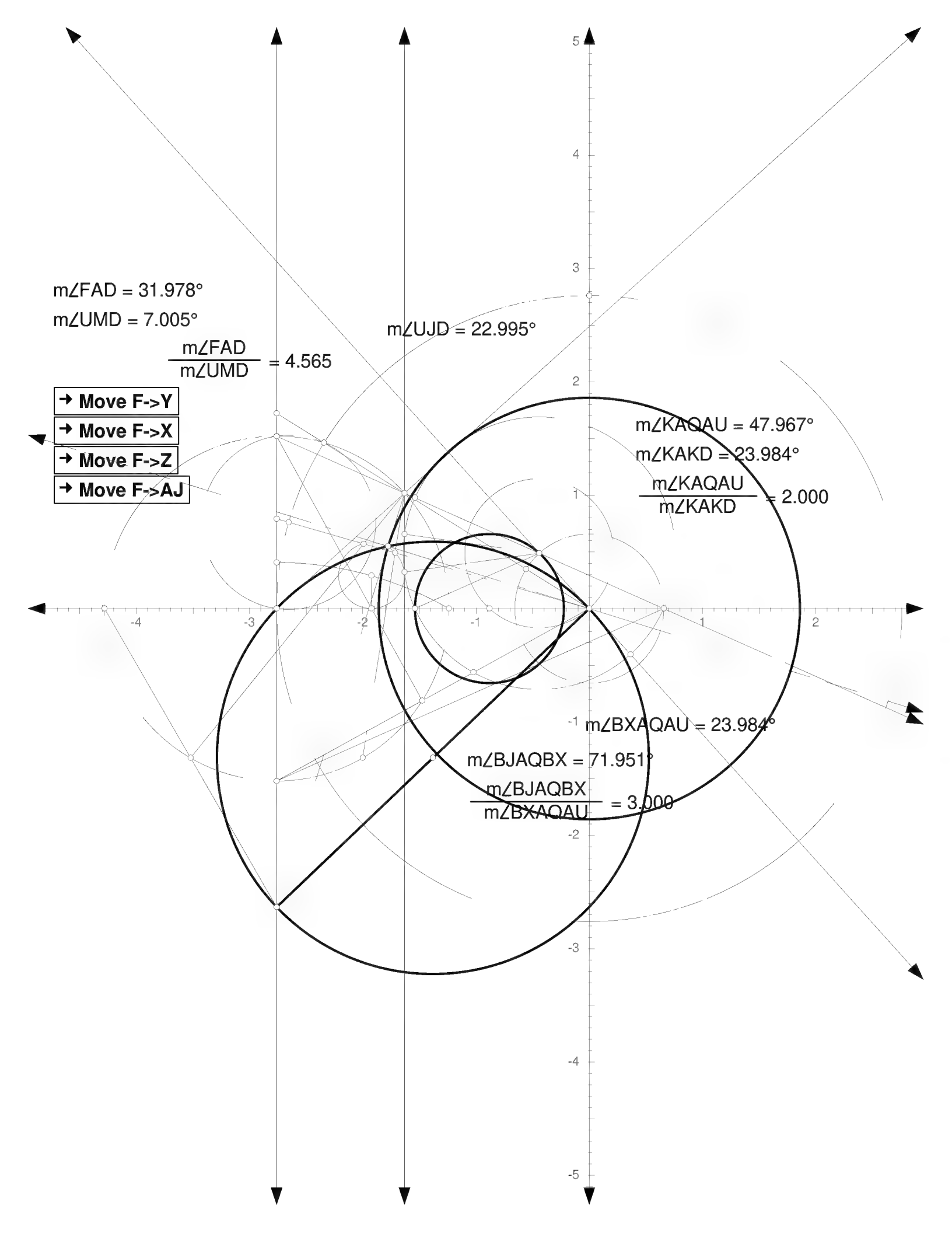
m ∠OAC = 56.685°

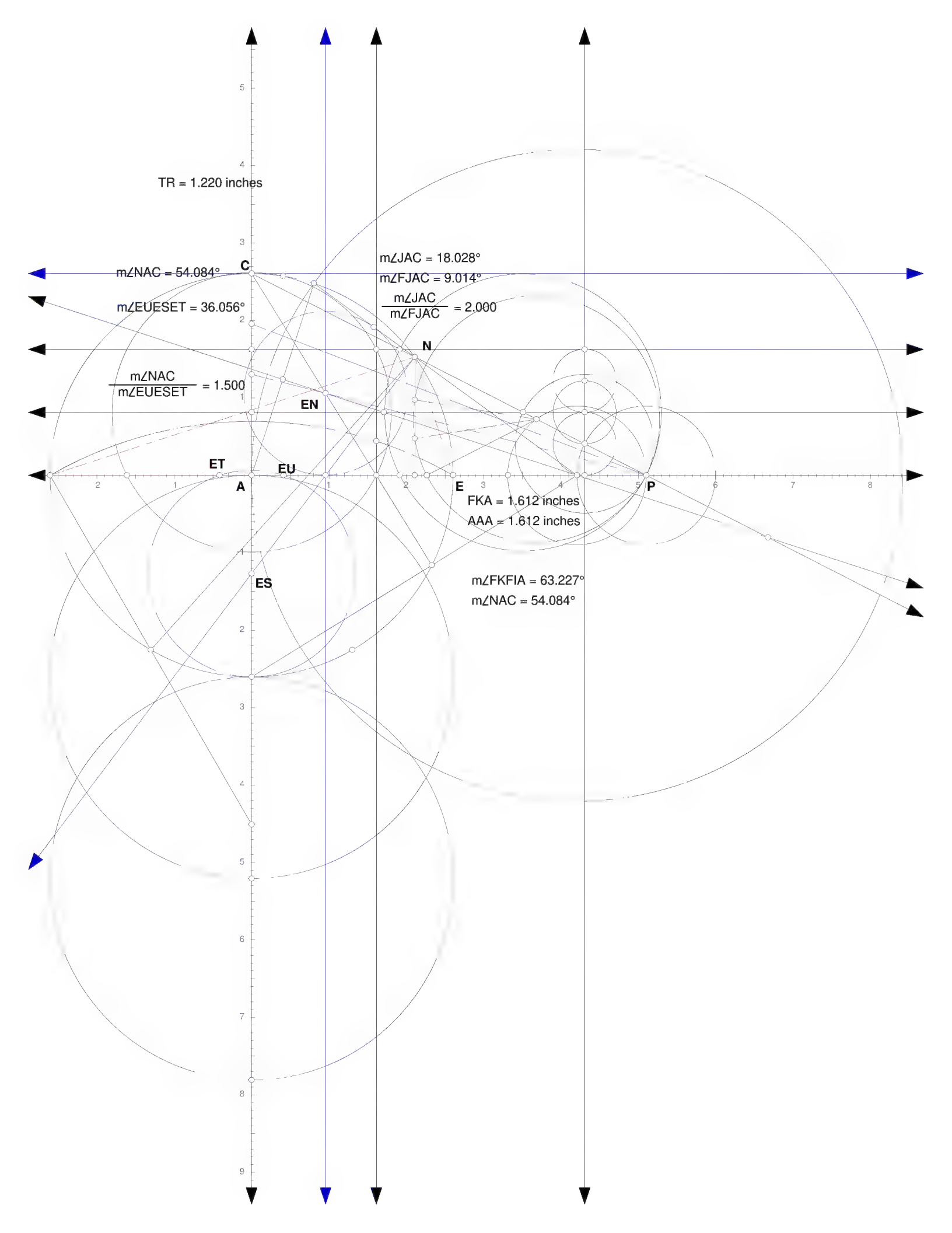
$\frac{m\angle OAC}{m\angle FUOBV} = 6.000$

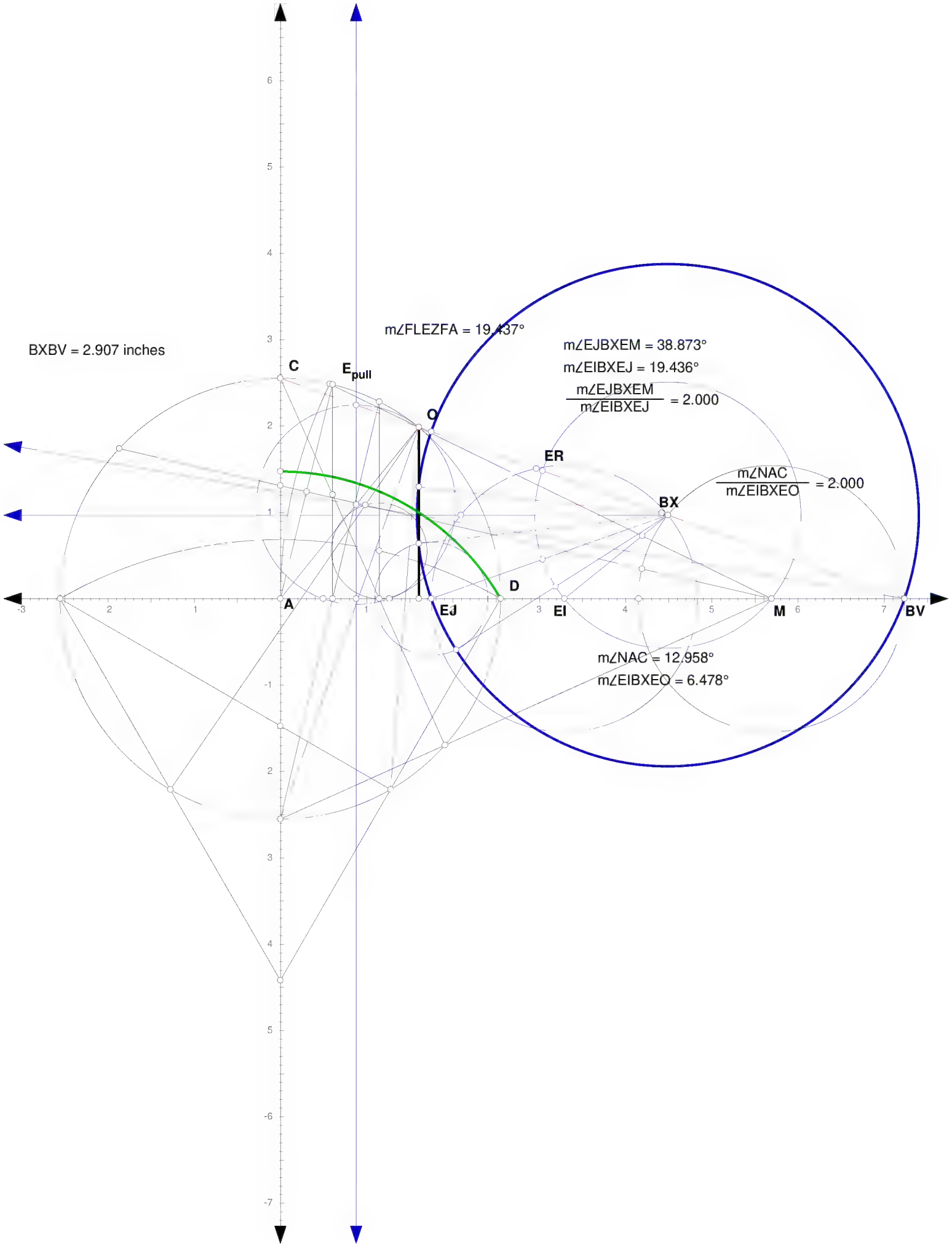


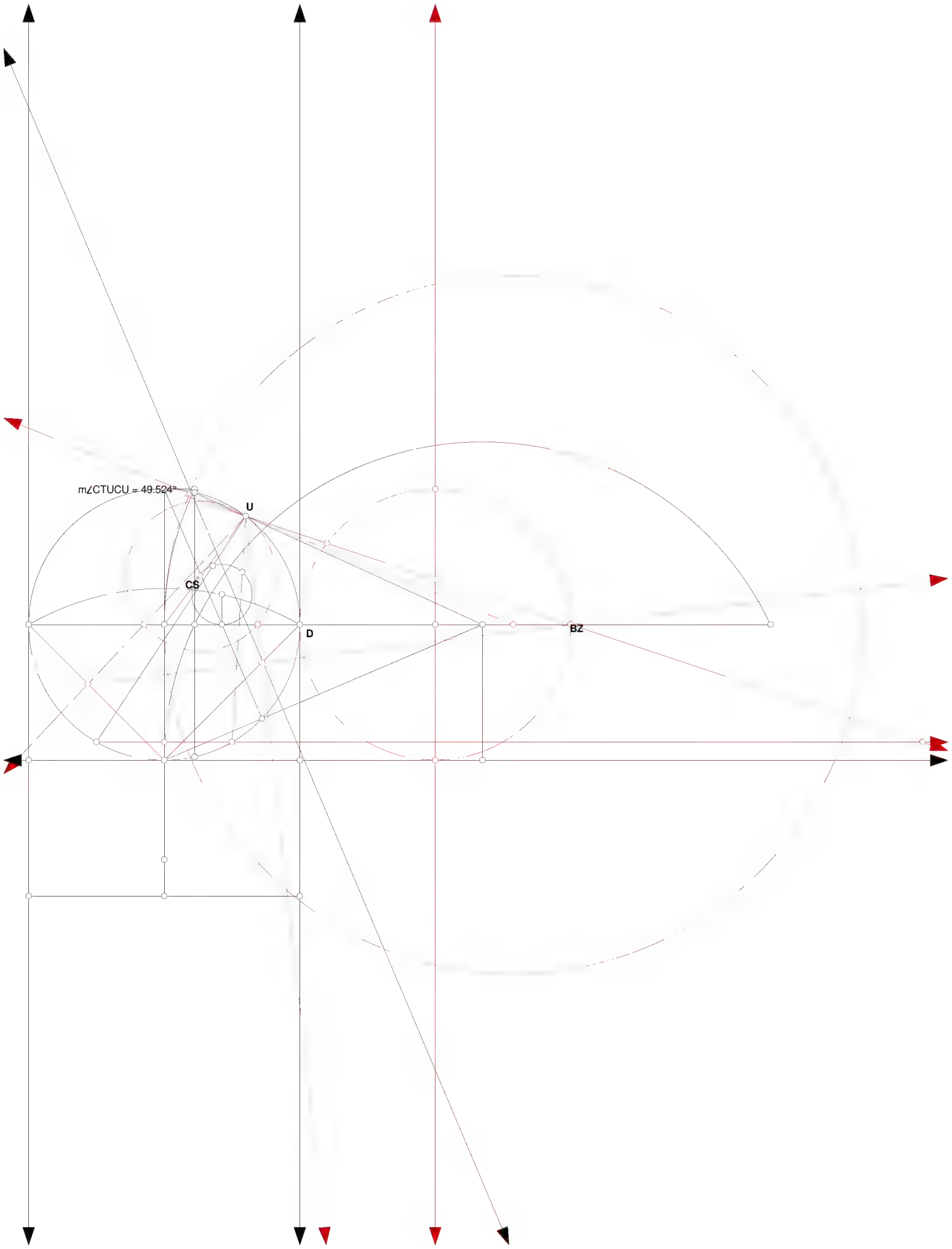

m∠GMGBK = 49.084°
m∠FVFUBV = 16.361°
m∠OAC = 49.084°
m∠XAY = 20.452°
m∠OAC / m∠XAY = 2.400
m∠OAC / m∠FVFUBV = 3.000
C
E_pull
J
O
KA = 1.438 inches
Y
X
A
M
BV

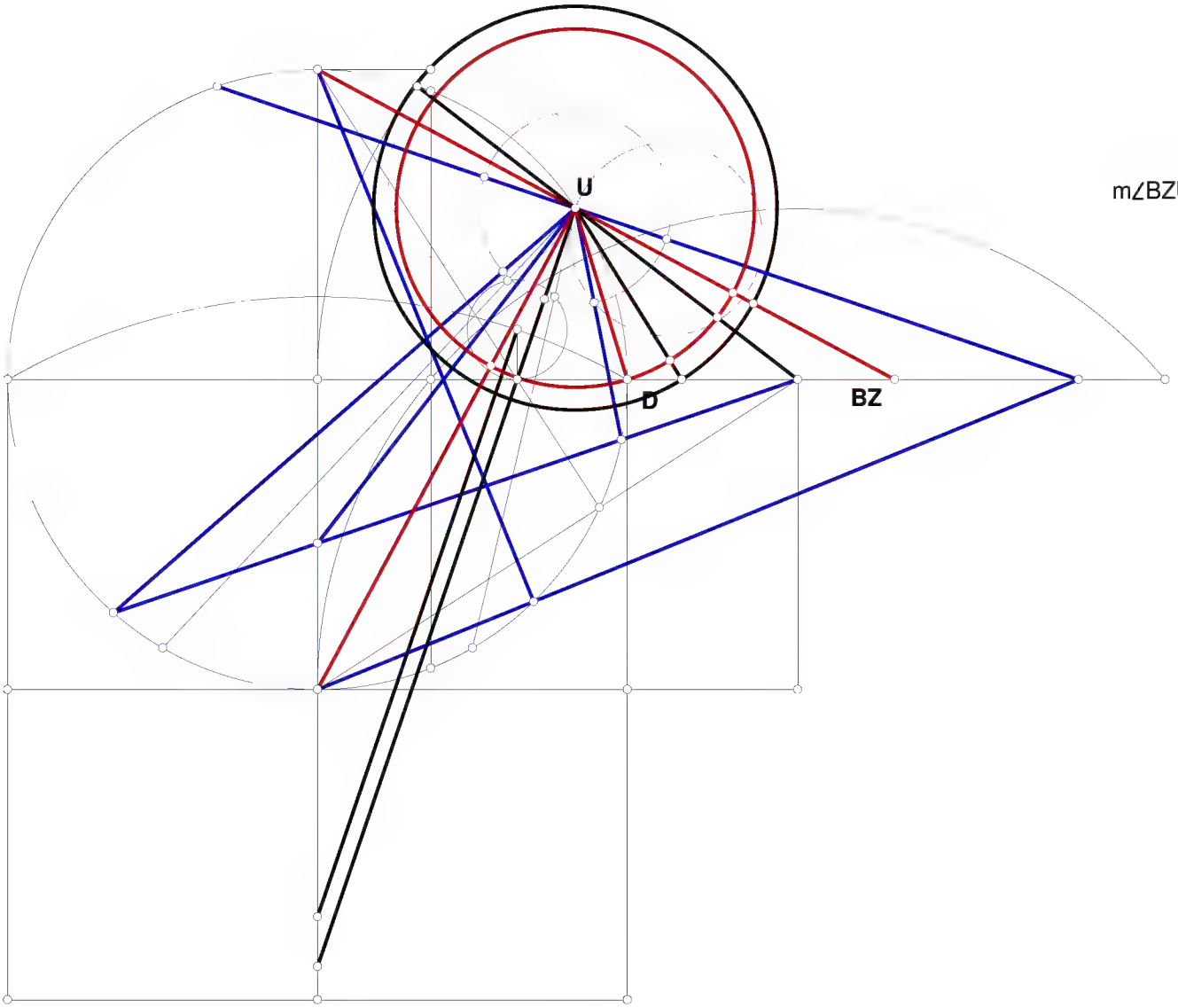

m∠BZUD = 45.000°
m∠BZUL = 9.735°
m∠UEI = 58.407°
m∠UEI / m∠BZUL = 6.000
m∠CIJE = 8.897°
m∠CMXE = 8.897°
m∠CILE = 38.557°


m∠FAD = 31.978°
m∠UMD = 7.005°
m∠FAD / m∠UMD = 4.565
m∠UJD = 22.995°
→ Move F->Y
→ Move F->X
→ Move F->Z
→ Move F->AJ
m∠KAQAU = 47.967°
m∠KAKD = 23.984°
m∠KAQAU / m∠KAKD = 2.000
m∠BXAQAU = 23.984°
m∠BJAQBX = 71.951°
m∠BJAQBX / m∠BXAQAU = 3.000

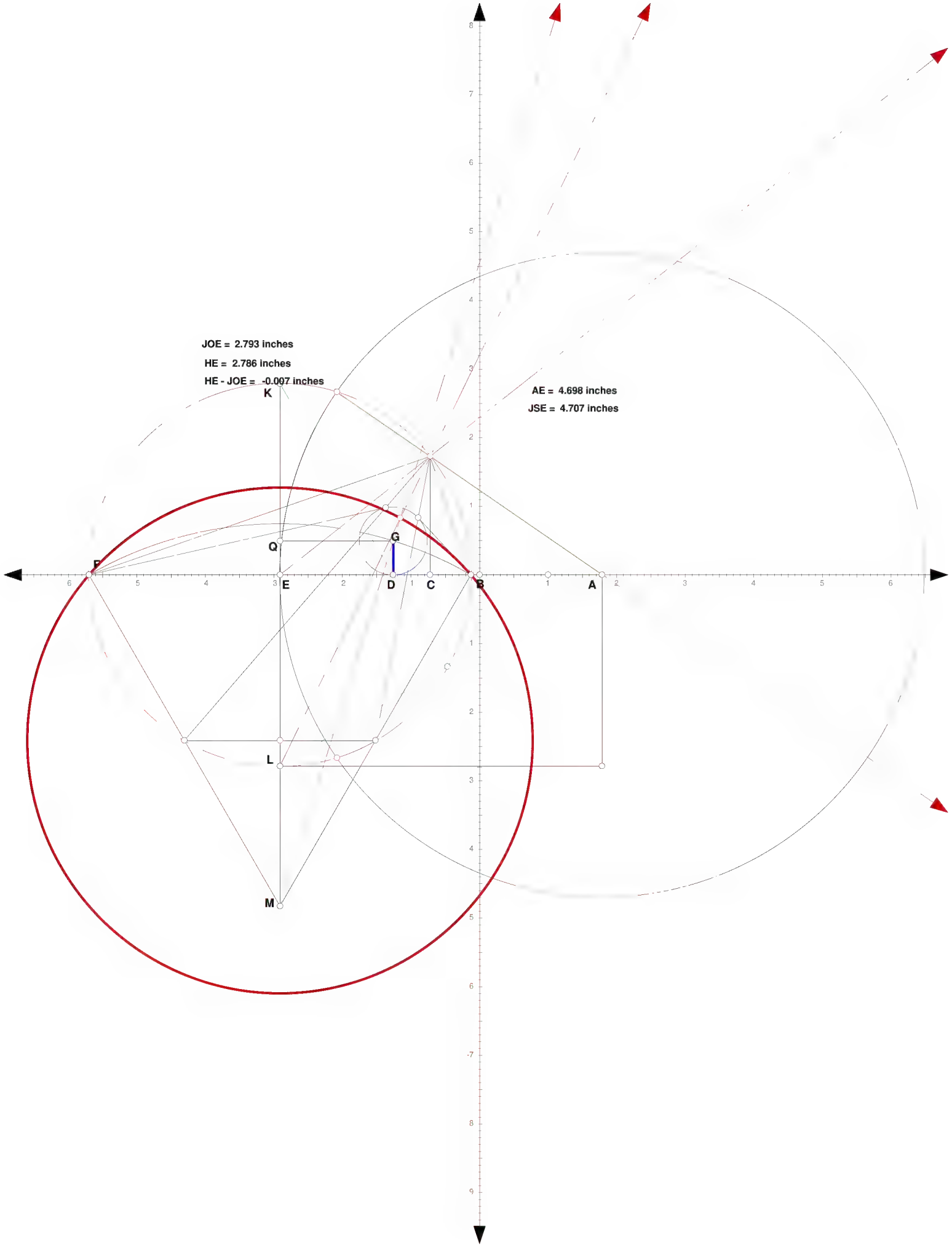

TR = 1.220 inches
m∠NAC = 54.084°
m∠EUESET = 36.056°
m∠NAC / m∠EUESET = 1.500
m∠JAC = 18.028°
m∠FJAC = 9.014°
m∠JAC / m∠FJAC = 2.000
C
N
EN
ET
EU
A
E
P
ES
FKA = 1.612 inches
AAA = 1.612 inches
m∠FKFIA = 63.227°
m∠NAC = 54.084°

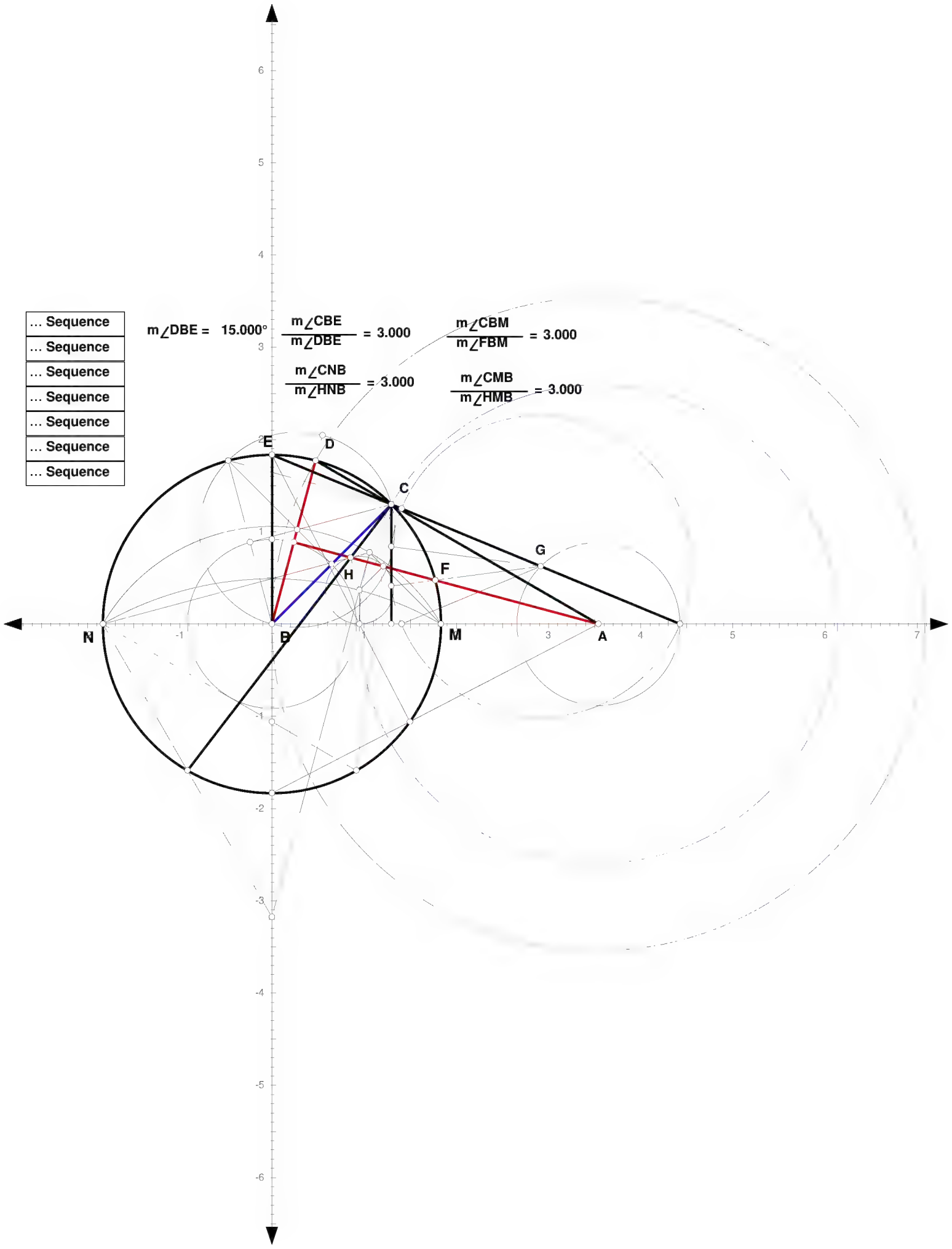

BXBV = 2.907 inches
m∠FLEZFA = 19.437°
m∠EJBXEM = 38.873°
m∠EIBXEJ = 19.436°
m∠EJBXEM / m∠EIBXEJ = 2.000
m∠NAC / m∠EIBXEO = 2.000
m∠NAC = 12.958°
m∠EIBXEO = 6.478°
C
Epull
O
ER
BX
D
A
EJ
EI
M
BV

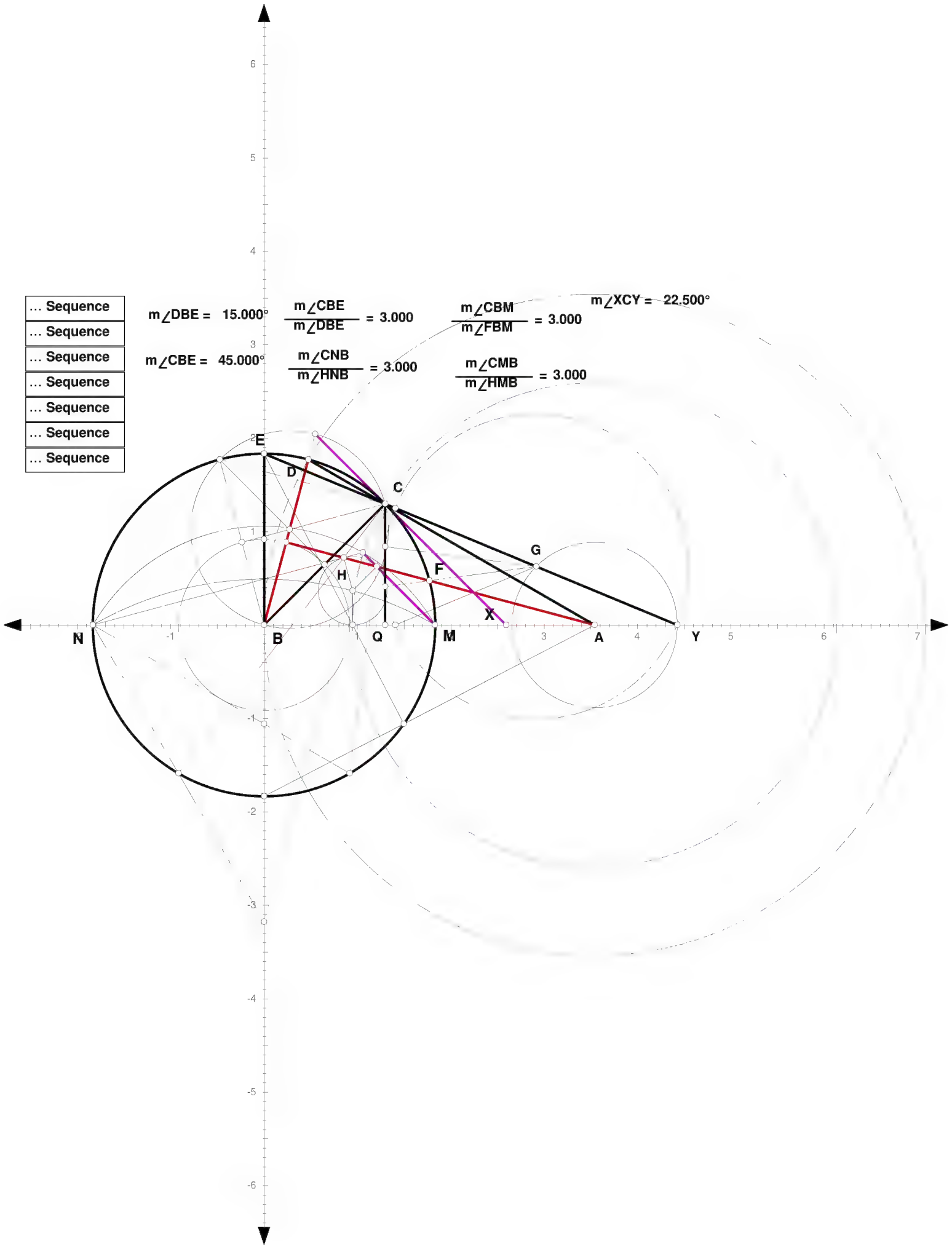

m∠CTUCU = 49.524°
U
CS
D
BZ

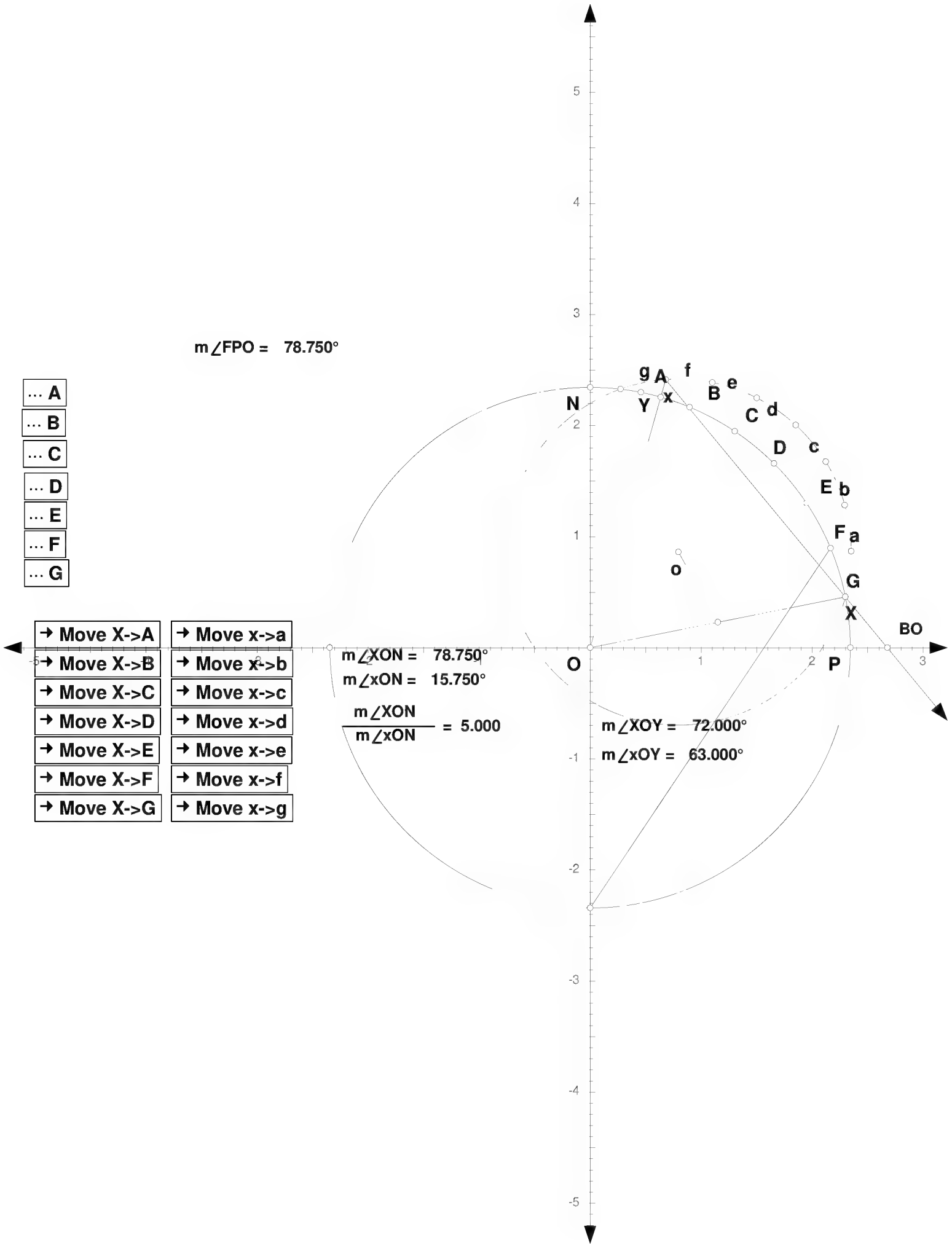


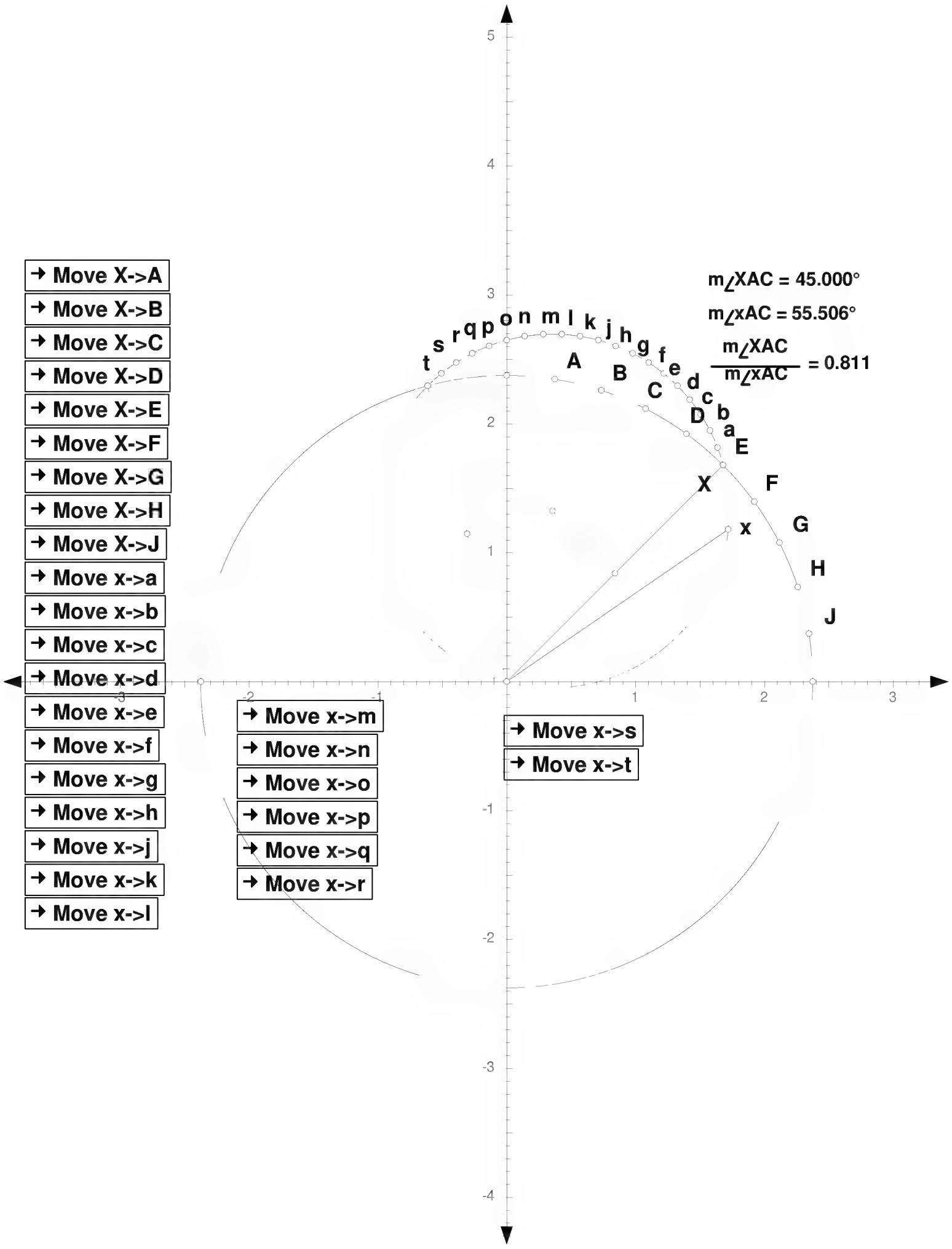
m∠BZUL = 9.404°

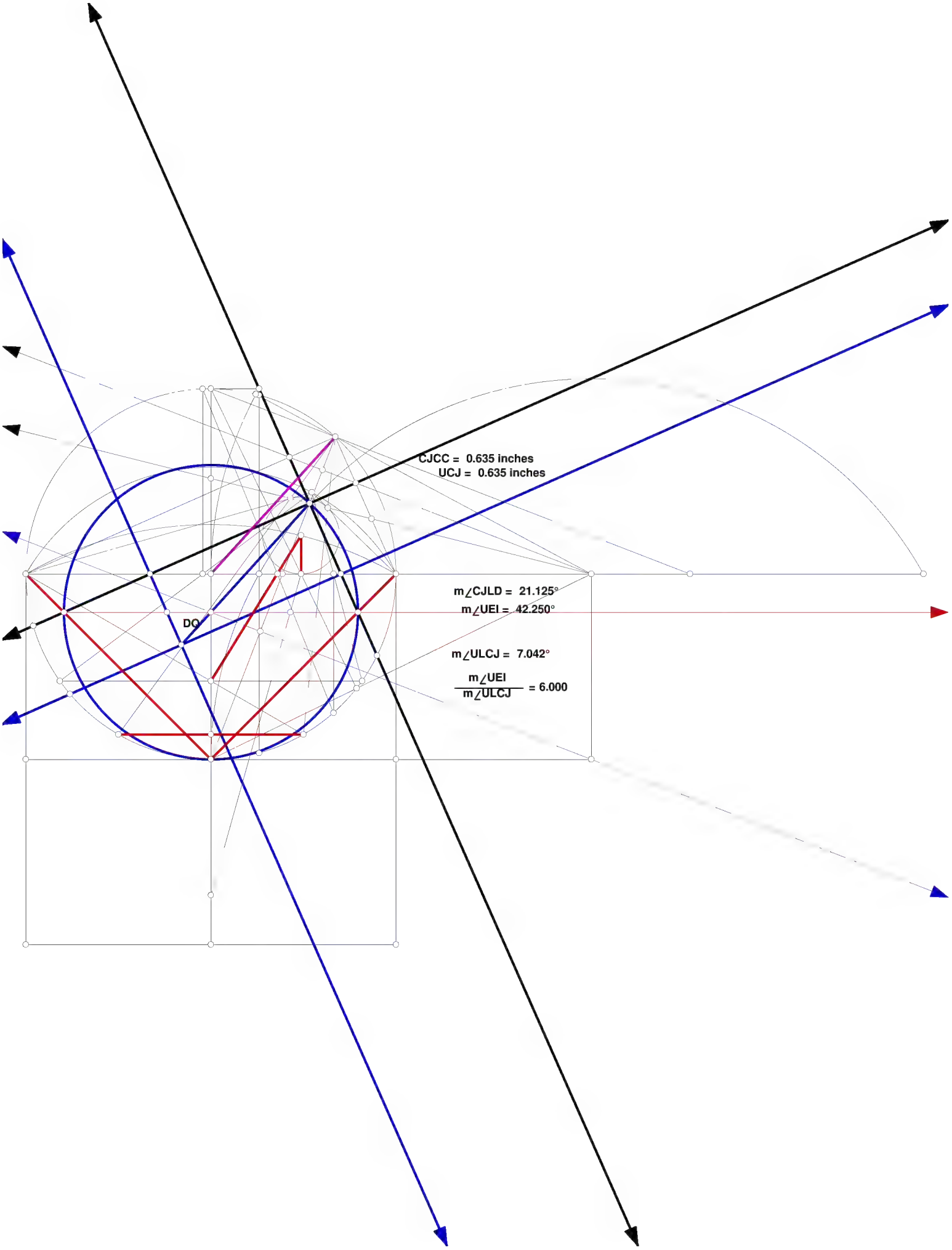

JOE = 2.793 inches
HE = 2.786 inches
HE - JOE = -0.007 inches
AE = 4.698 inches
JSE = 4.707 inches
K
Q
G
F
E
D
C
B
A
L
M

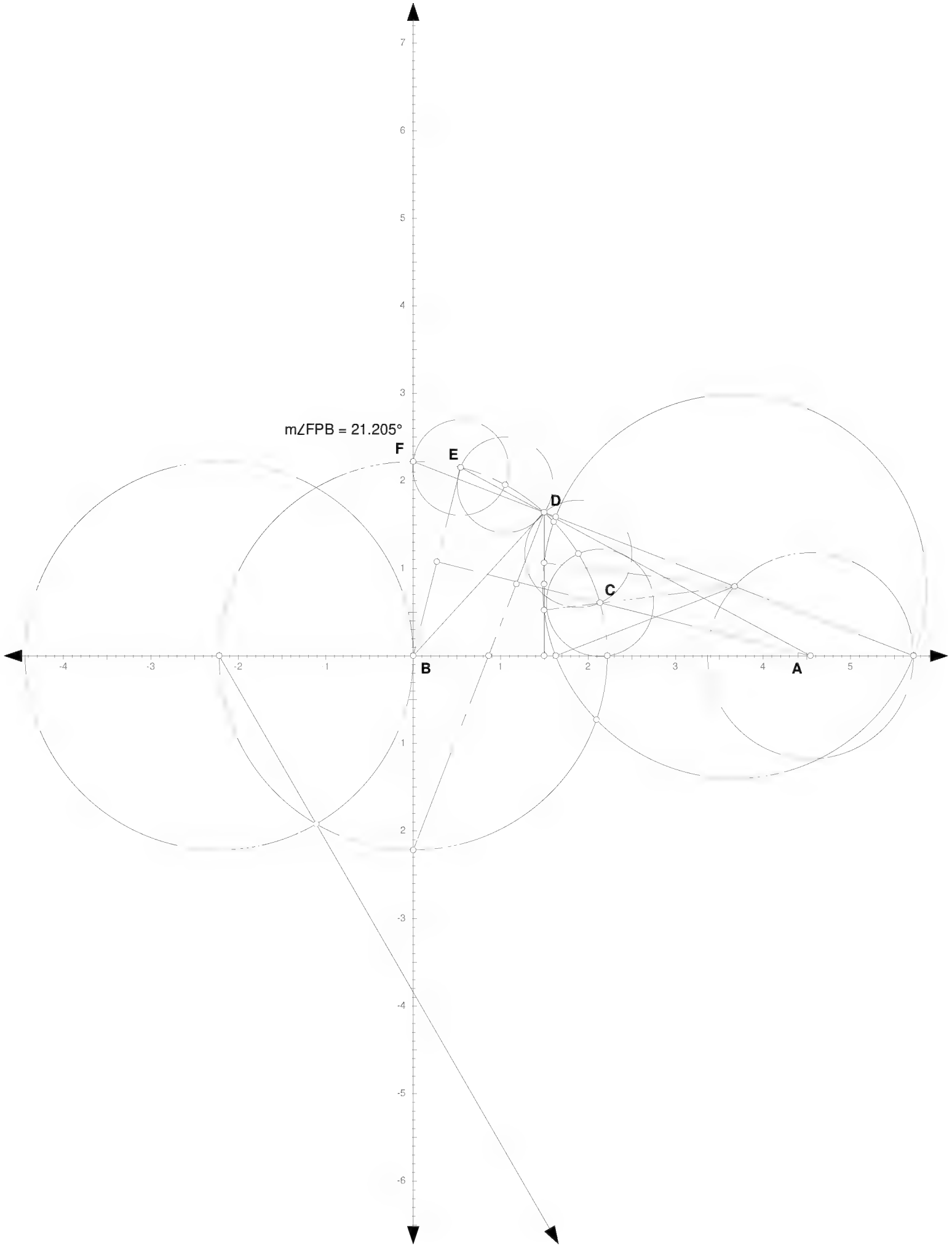

... Sequence
... Sequence
... Sequence
... Sequence
... Sequence
... Sequence
... Sequence
m∠DBE = 15.000°
m∠CBE / m∠DBE = 3.000
m∠CBM / m∠FBM = 3.000
m∠CNB / m∠HNB = 3.000
m∠CMB / m∠HMB = 3.000
E
D
C
G
F
H
N
B
M
A

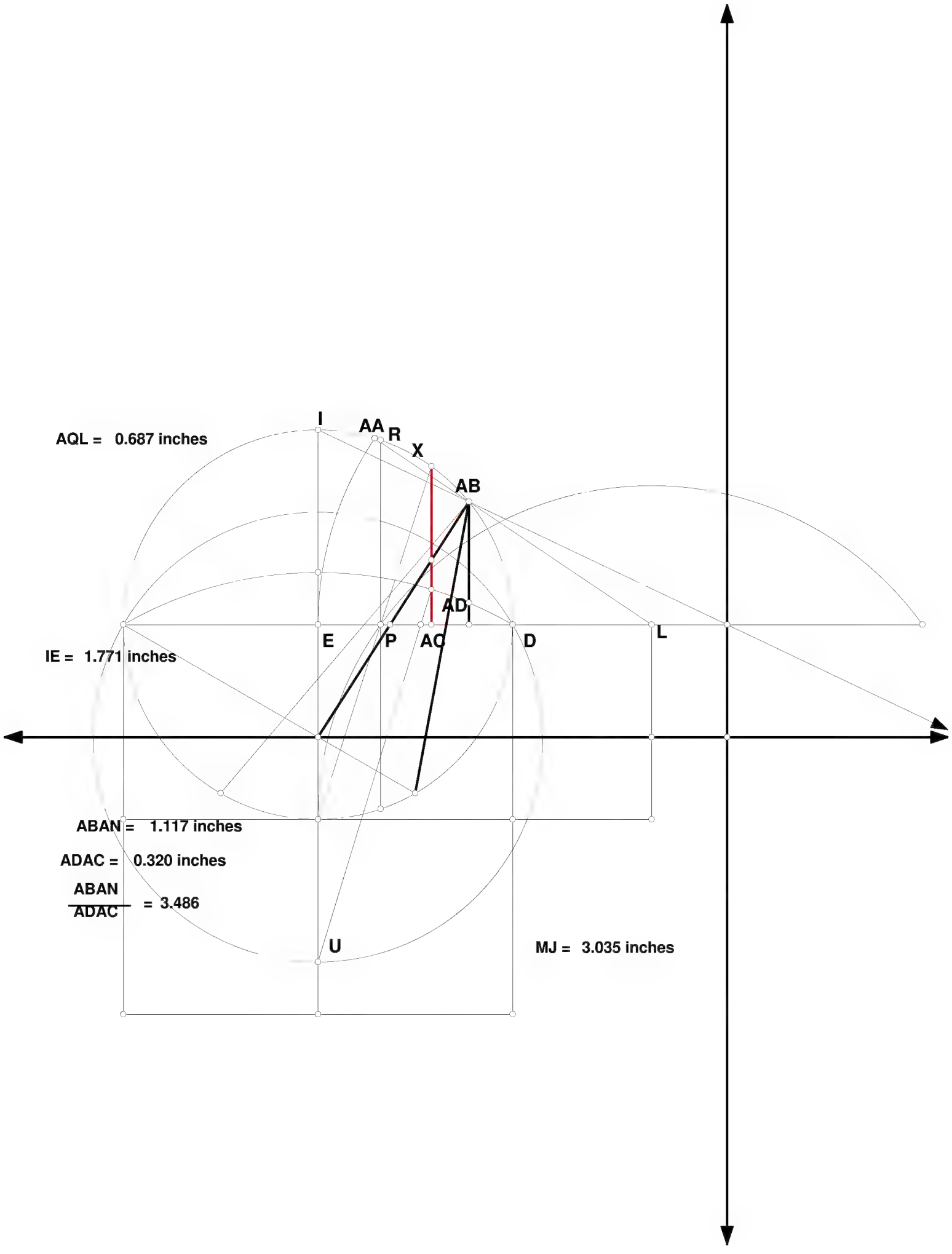

… Sequence
… Sequence
… Sequence
… Sequence
… Sequence
… Sequence
… Sequence
m∠DBE = 15.000°
m∠CBE / m∠DBE = 3.000
m∠CBM / m∠FBM = 3.000
m∠XCY = 22.500°
m∠CBE = 45.000°
m∠CNB / m∠HNB = 3.000
m∠CMB / m∠HMB = 3.000
E
D
C
G
H
F
X
N
B
Q
M
A
Y

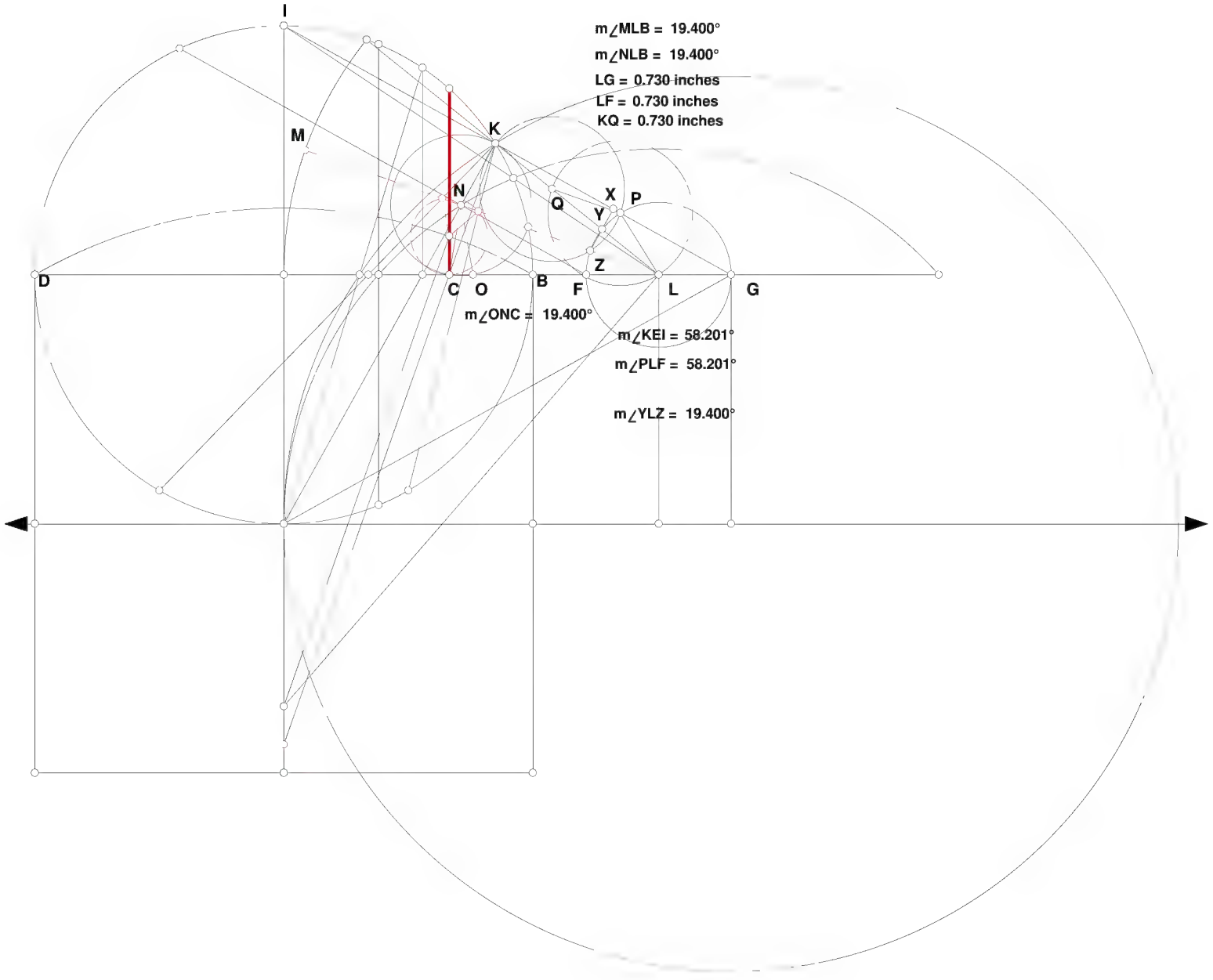

m∠FPO = 78.750°
... A
... B
... C
... D
... E
... F
... G
→ Move X->A
→ Move X->B
→ Move X->C
→ Move X->D
→ Move X->E
→ Move X->F
→ Move X->G
→ Move x->a
→ Move x->b
→ Move x->c
→ Move x->d
→ Move x->e
→ Move x->f
→ Move x->g
m∠XON = 78.750°
m∠xON = 15.750°
m∠XON / m∠xON = 5.000
m∠XOY = 72.000°
m∠xOY = 63.000°
BO
N
O
P
A
B
C
D
E
F
G
X
Y
x
a
b
c
d
e
f
g
o

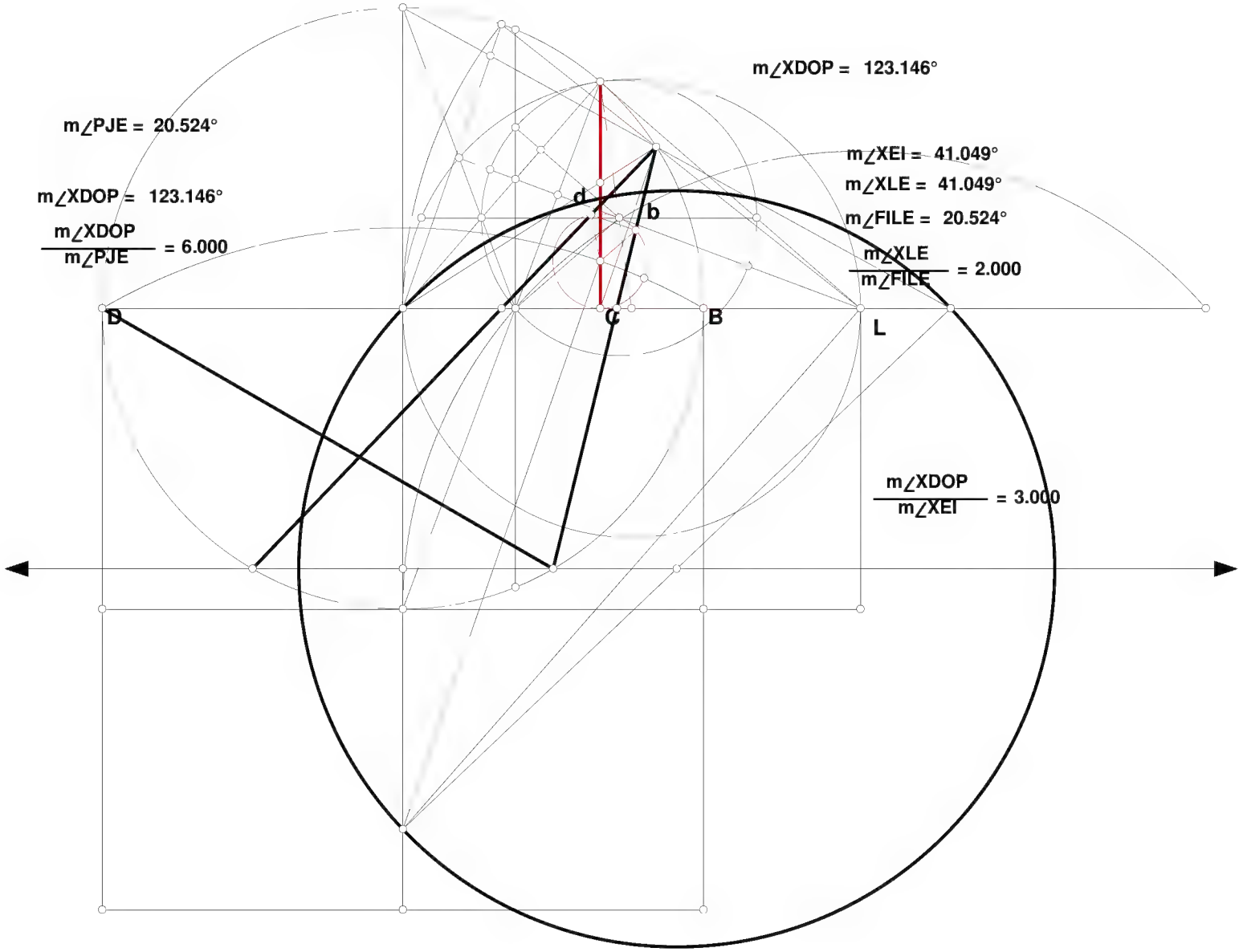

→ Move X->A
→ Move X->B
→ Move X->C
→ Move X->D
→ Move X->E
→ Move X->F
→ Move X->G
→ Move X->H
→ Move X->J
→ Move x->a
→ Move x->b
→ Move x->c
→ Move x->d
→ Move x->e
→ Move x->f
→ Move x->g
→ Move x->h
→ Move x->j
→ Move x->k
→ Move x->l
→ Move x->m
→ Move x->n
→ Move x->o
→ Move x->p
→ Move x->q
→ Move x->r
→ Move x->s
→ Move x->t
m∠XAC = 45.000°
m∠xAC = 55.506°
m∠XAC / m∠xAC = 0.811
t s r q p o n m l k j h g f e d c b a
A B C D E F G H J
X x
5 4 3 2 1 -1 -2 -3 -4
-3 -2 -1 1 2 3

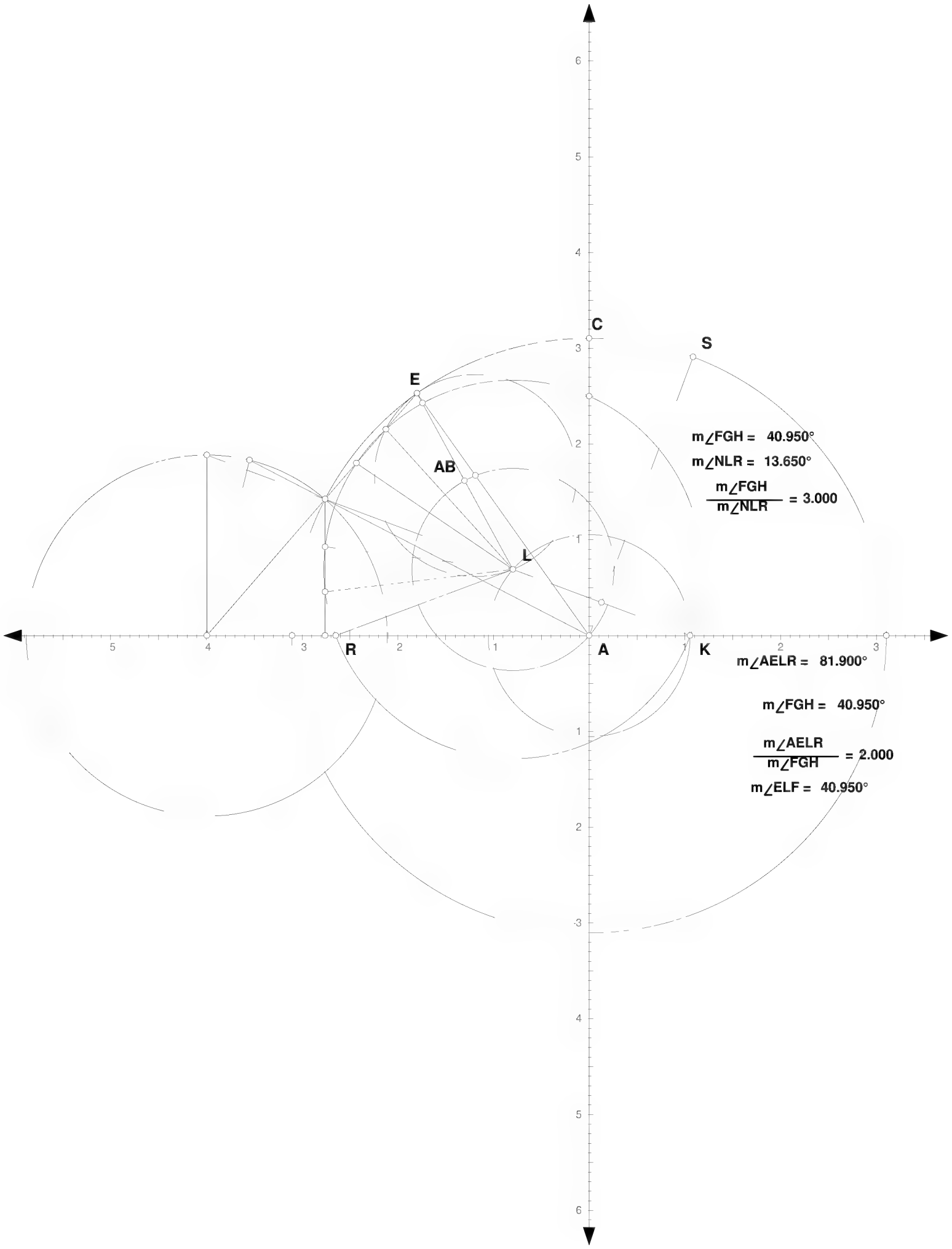

CJCC = 0.635 inches
UCJ = 0.635 inches
m∠CJLD = 21.125°
m∠UEI = 42.250°
DQ
m∠ULCJ = 7.042°
m∠UEI / m∠ULCJ = 6.000

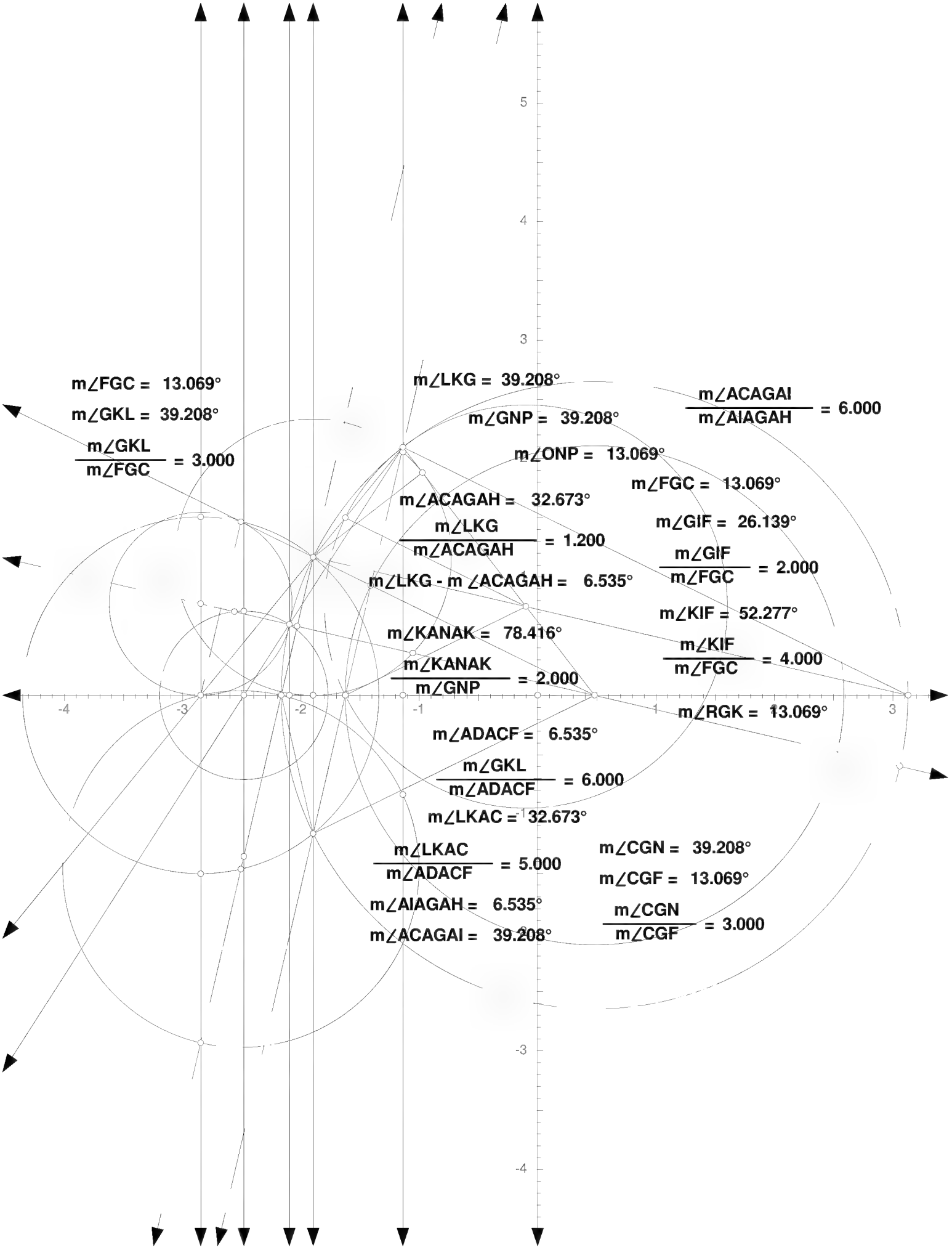

m∠FPB = 21.205°
F
E
D
C
B
A

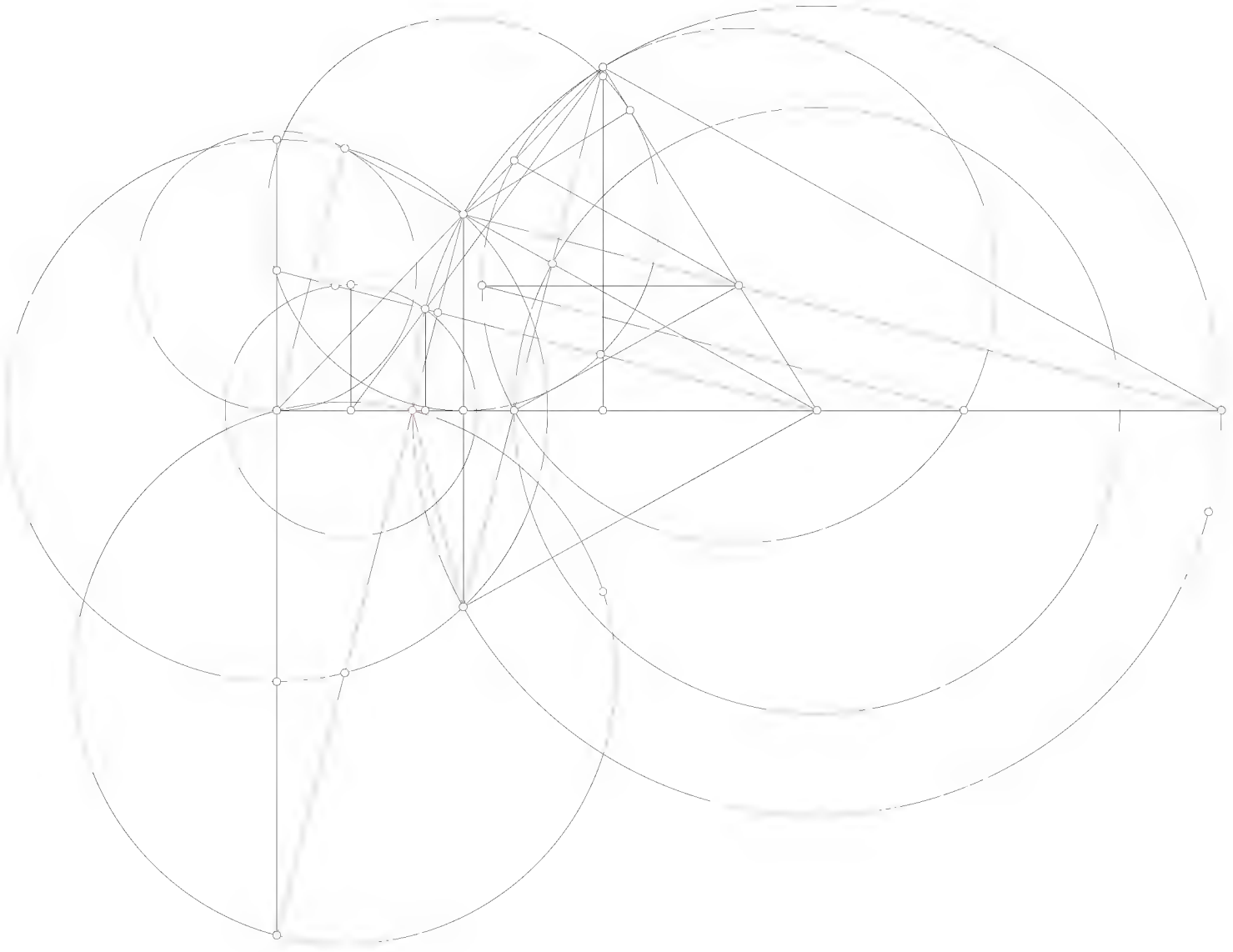

I
AA
R
X
AB
AD
E
P
AC
D
L
AQL = 0.687 inches
IE = 1.771 inches
ABAN = 1.117 inches
ADAC = 0.320 inches
ABAN / ADAC = 3.486
U
MJ = 3.035 inches

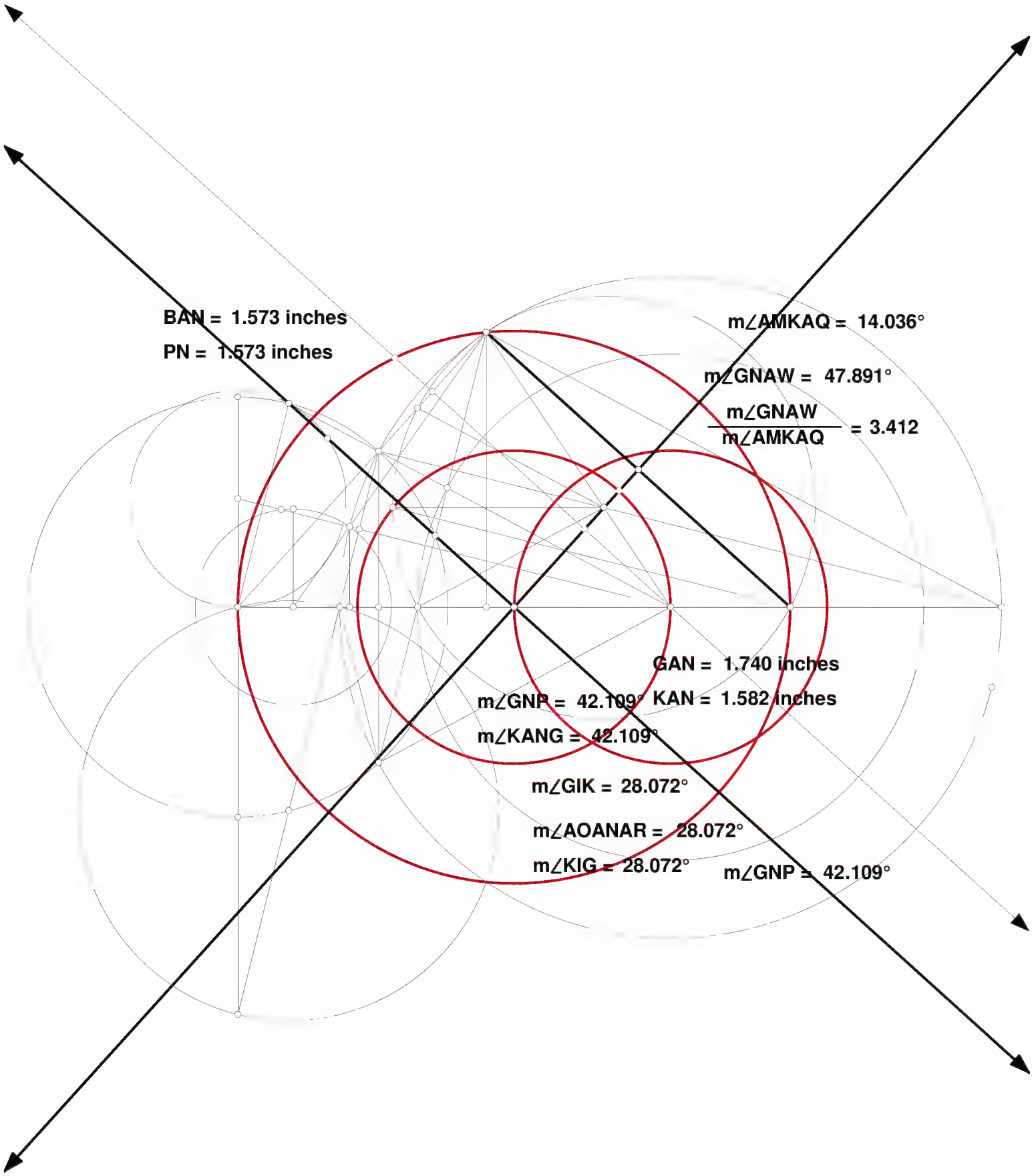

I
m∠MLB = 19.400°
m∠NLB = 19.400°
LG = 0.730 inches
LF = 0.730 inches
KQ = 0.730 inches
M
K
N
Q
X
P
Y
Z
D
C
O
B
F
L
G
m∠ONC = 19.400°
m∠KEI = 58.201°
m∠PLF = 58.201°
m∠YLZ = 19.400°

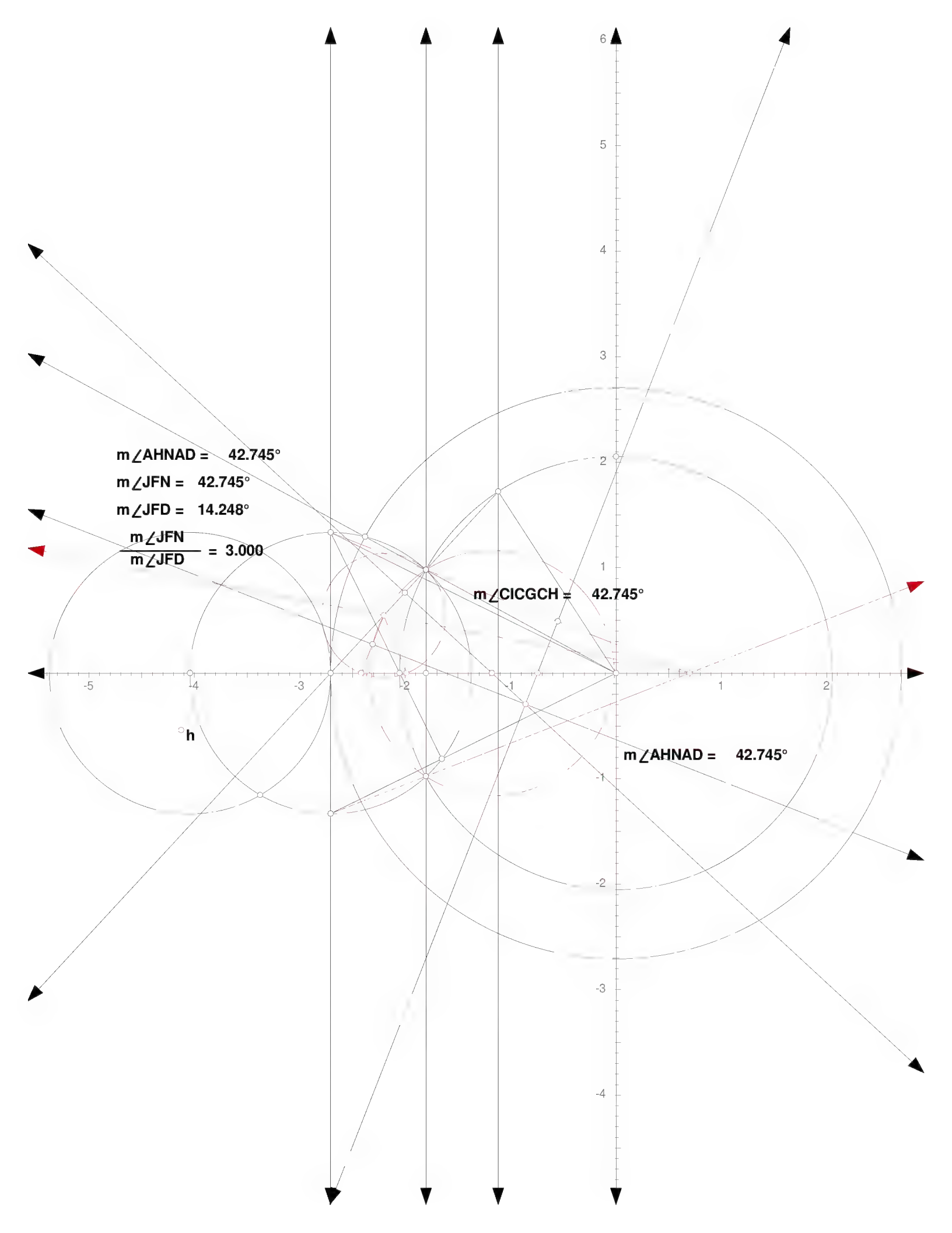

m∠XDOP = 123.146°
m∠PJE = 20.524°
m∠XEI = 41.049°
m∠XLE = 41.049°
m∠FILE = 20.524°
m∠XDOP = 123.146°
m∠XDOP / m∠PJE = 6.000
m∠XLE / m∠FILE = 2.000
m∠XDOP / m∠XEI = 3.000
d
b
D
C
B
L

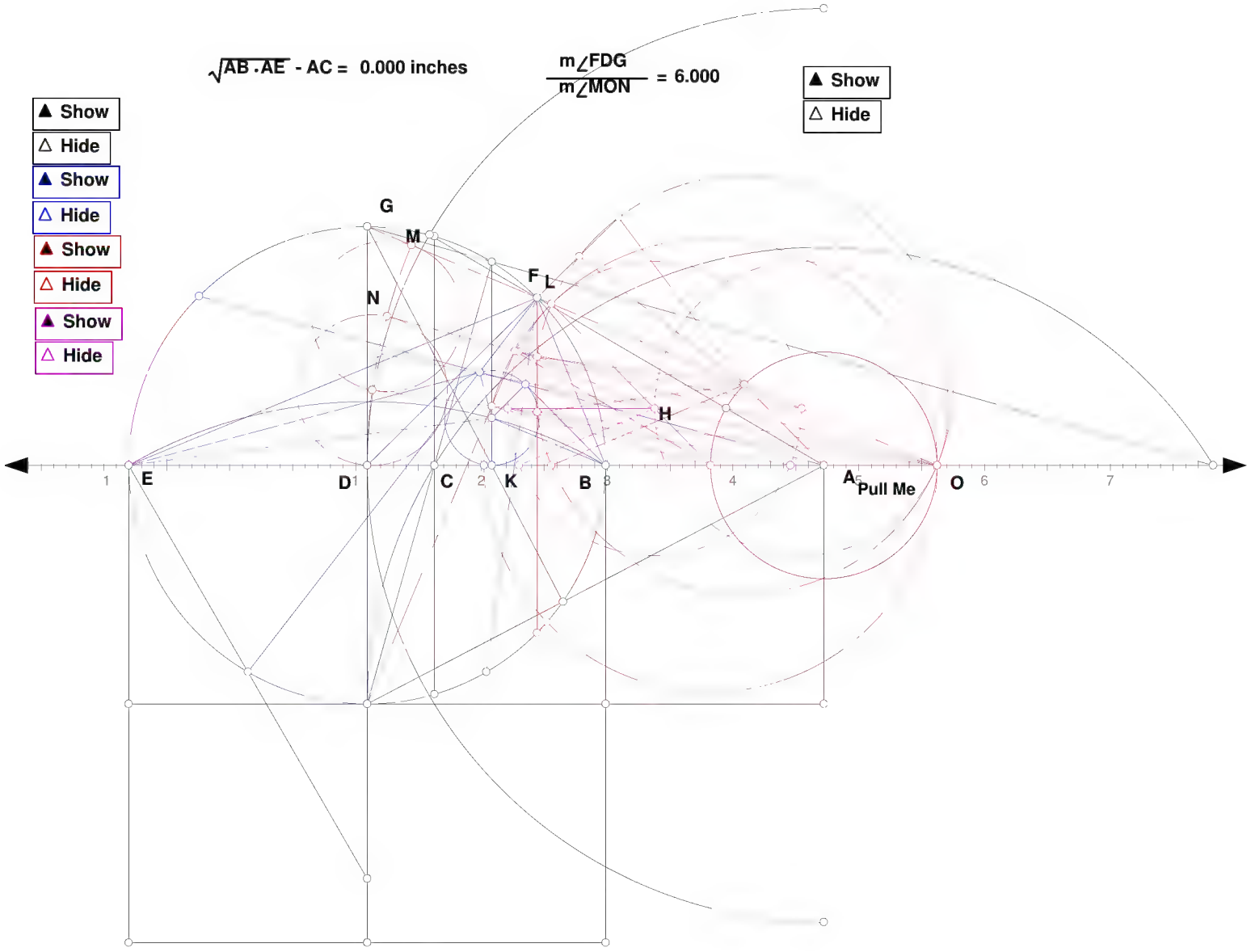

C
S
E
AB
L
R
A
K
m∠FGH = 40.950°
m∠NLR = 13.650°
m∠FGH / m∠NLR = 3.000
m∠AELR = 81.900°
m∠FGH = 40.950°
m∠AELR / m∠FGH = 2.000
m∠ELF = 40.950°

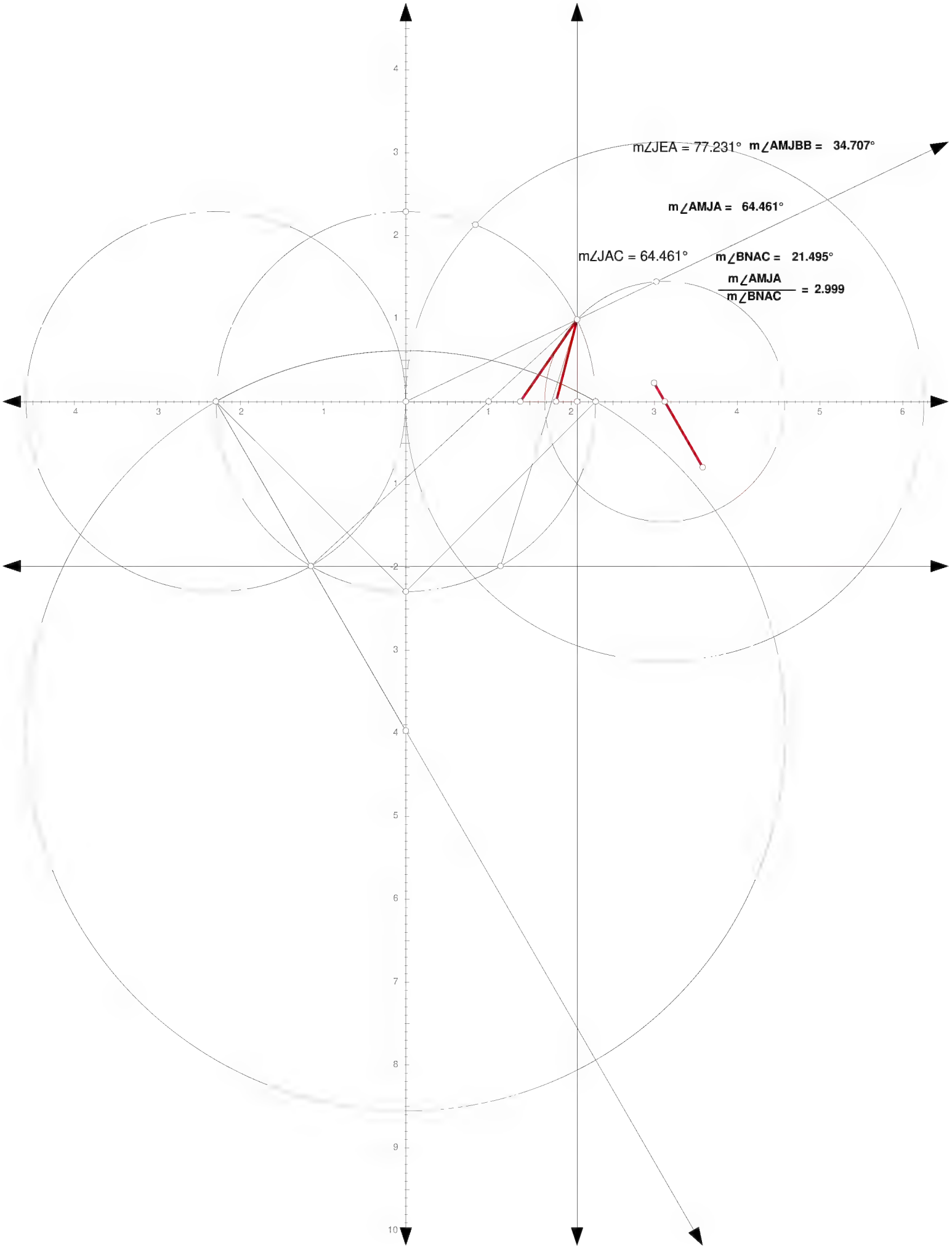

m∠FGC = 13.069°
m∠GKL = 39.208°
m∠GKL / m∠FGC = 3.000
m∠LKG = 39.208°
m∠GNP = 39.208°
m∠ONP = 13.069°
m∠FGC = 13.069°
m∠ACAGAH = 32.673°
m∠LKG / m∠ACAGAH = 1.200
m∠LKG - m ∠ACAGAH = 6.535°
m∠KANAK = 78.416°
m∠KANAK / m∠GNP = 2.000
m∠ACAGAI / m∠AIAGAH = 6.000
m∠GIF = 26.139°
m∠GIF / m∠FGC = 2.000
m∠KIF = 52.277°
m∠KIF / m∠FGC = 4.000
m∠RGK = 13.069°
m∠ADACF = 6.535°
m∠GKL / m∠ADACF = 6.000
m∠LKAC = 32.673°
m∠LKAC / m∠ADACF = 5.000
m∠AIAGAH = 6.535°
m∠ACAGAI = 39.208°
m∠CGN = 39.208°
m∠CGF = 13.069°
m∠CGN / m∠CGF = 3.000
5
4
3
-3
-4
-4
-3
-2
-1
1
3

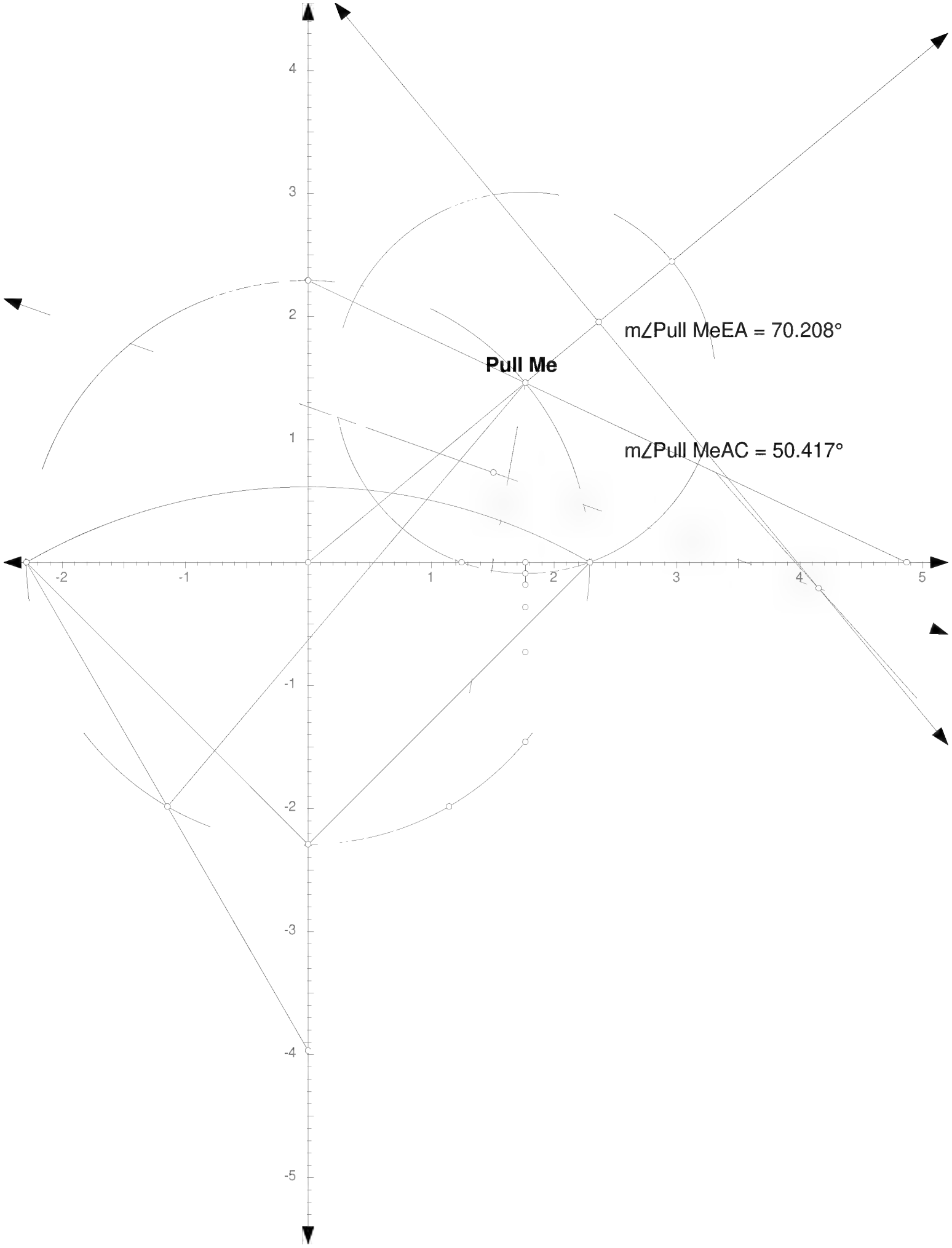


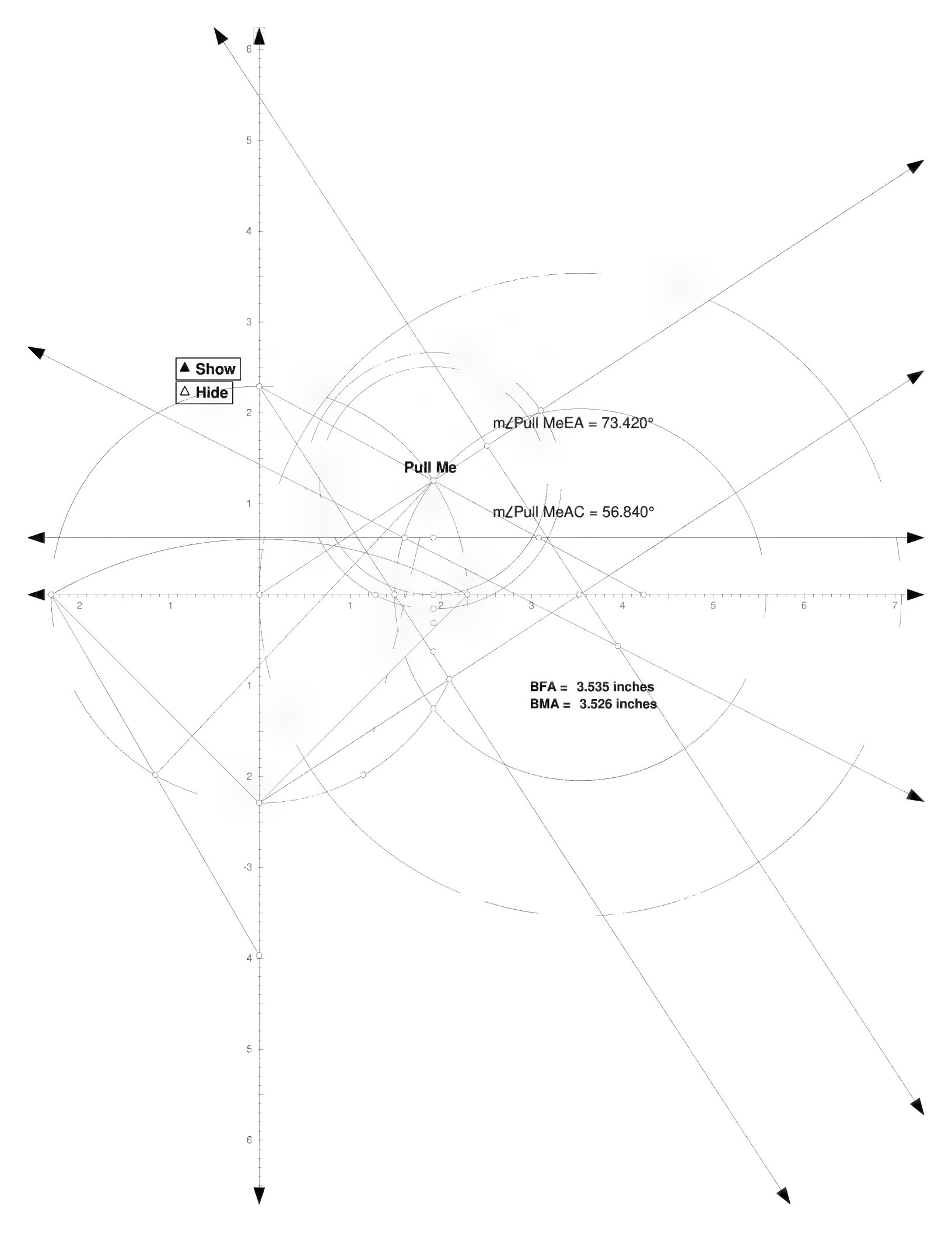

BAN = 1.573 inches
PN = 1.573 inches
m∠AMKAQ = 14.036°
m∠GNAW = 47.891°
m∠GNAW / m∠AMKAQ = 3.412
GAN = 1.740 inches
m∠GNP = 42.109°
KAN = 1.582 inches
m∠KANG = 42.109°
m∠GIK = 28.072°
m∠AOANAR = 28.072°
m∠KIG = 28.072°
m∠GNP = 42.109°

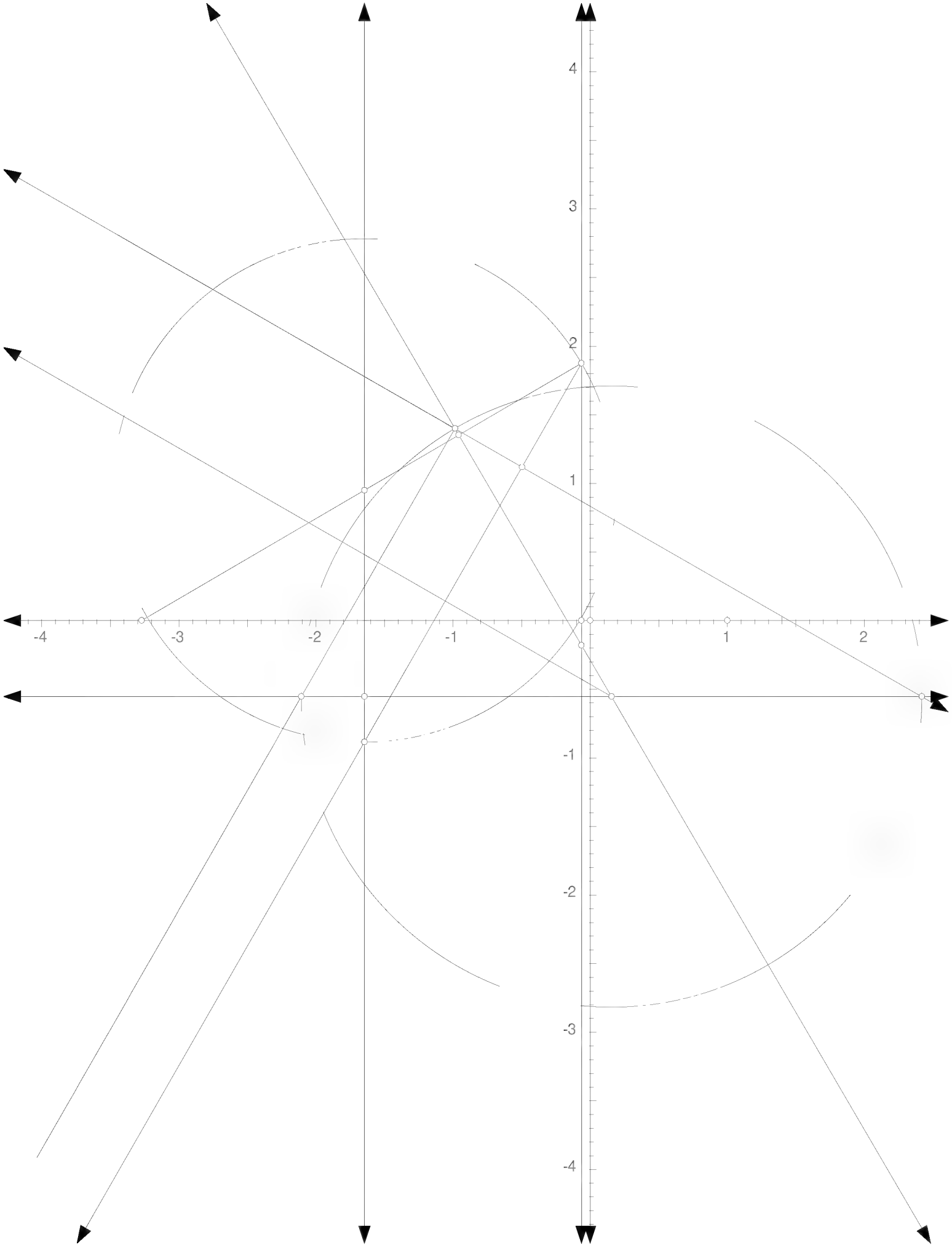

m∠AHNAD = 42.745°
m∠JFN = 42.745°
m∠JFD = 14.248°
m∠JFN / m∠JFD = 3.000
m∠CICGCH = 42.745°
m∠AHNAD = 42.745°
h

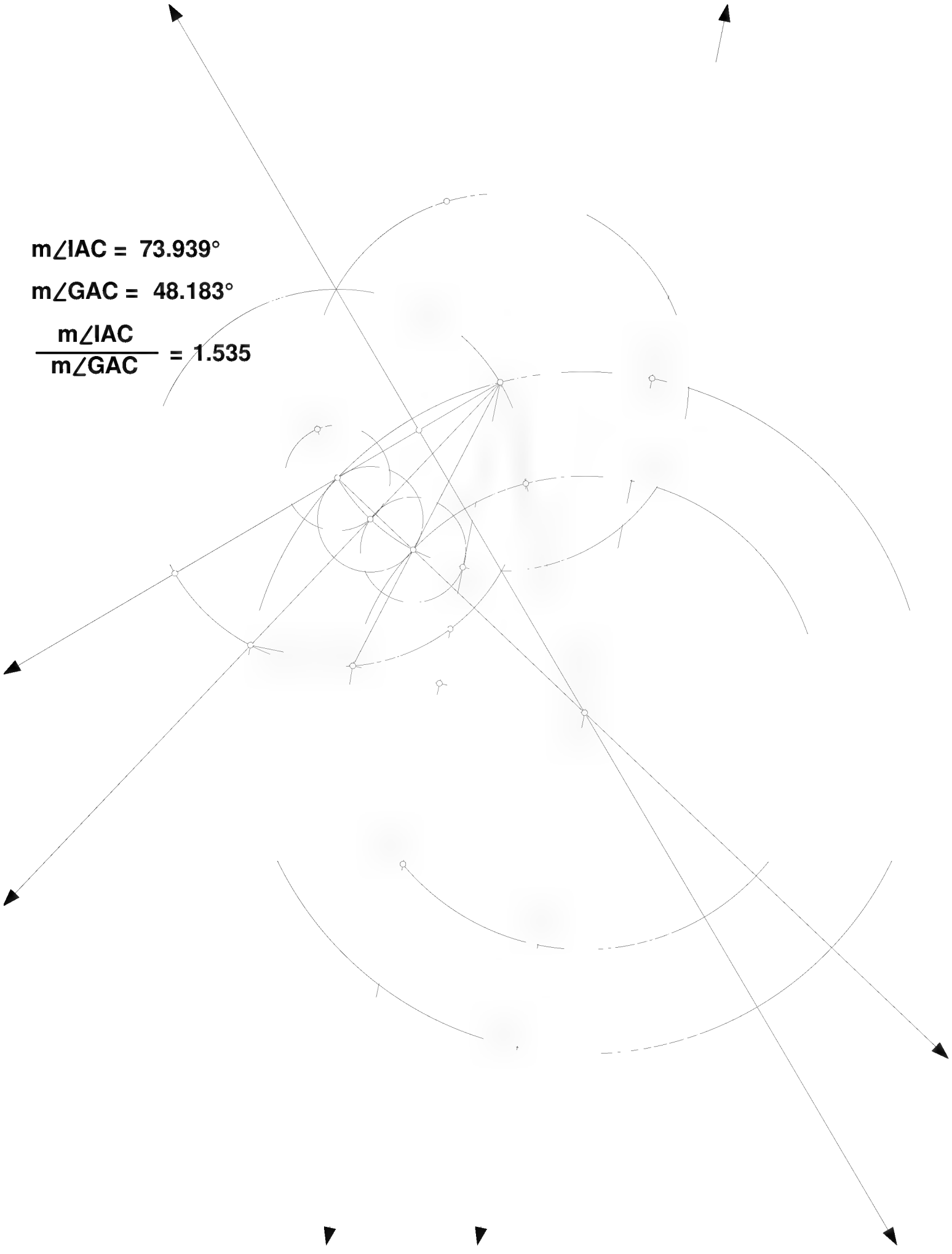

$\sqrt{AB \cdot AE}$ - AC = 0.000 inches
$\frac{m\angle FDG}{m\angle MON}$ = 6.000
Show
Hide
Show
Hide
Show
Hide
Show
Hide
Show
Hide
G
M
N
F
L
H
E
D
C
K
B
A
Pull Me
O
1
2
3
4
5
6
7

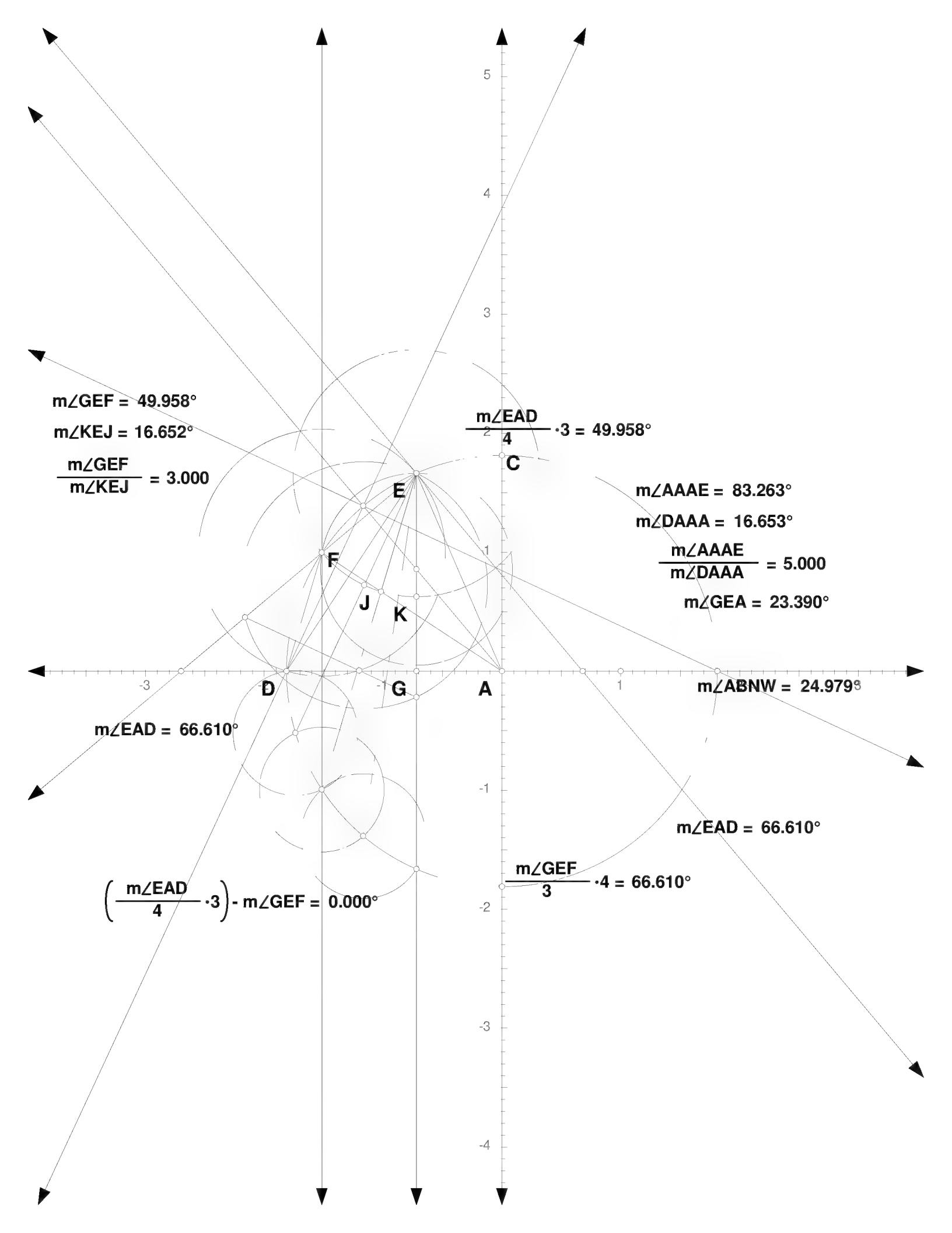

m∠JEA = 77.231°
m∠AMJBB = 34.707°
m∠AMJA = 64.461°
m∠JAC = 64.461°
m∠BNAC = 21.495°
m∠AMJA / m∠BNAC = 2.999

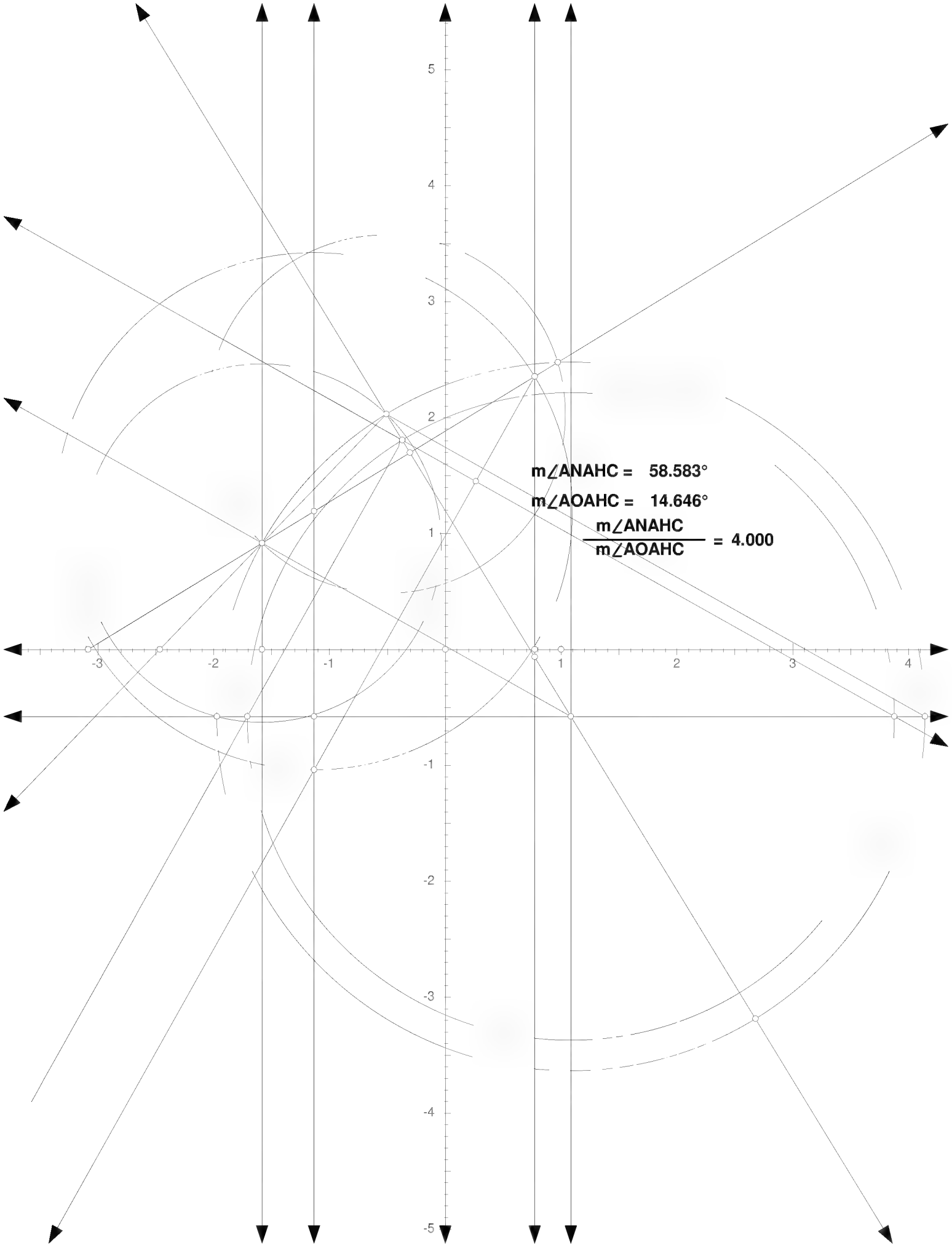

m∠Pull MeEA = 70.208°
Pull Me
m∠Pull MeAC = 50.417°
4
3
2
1
-1
-2
-3
-4
-5
-2
-1
1
2
3
4
5

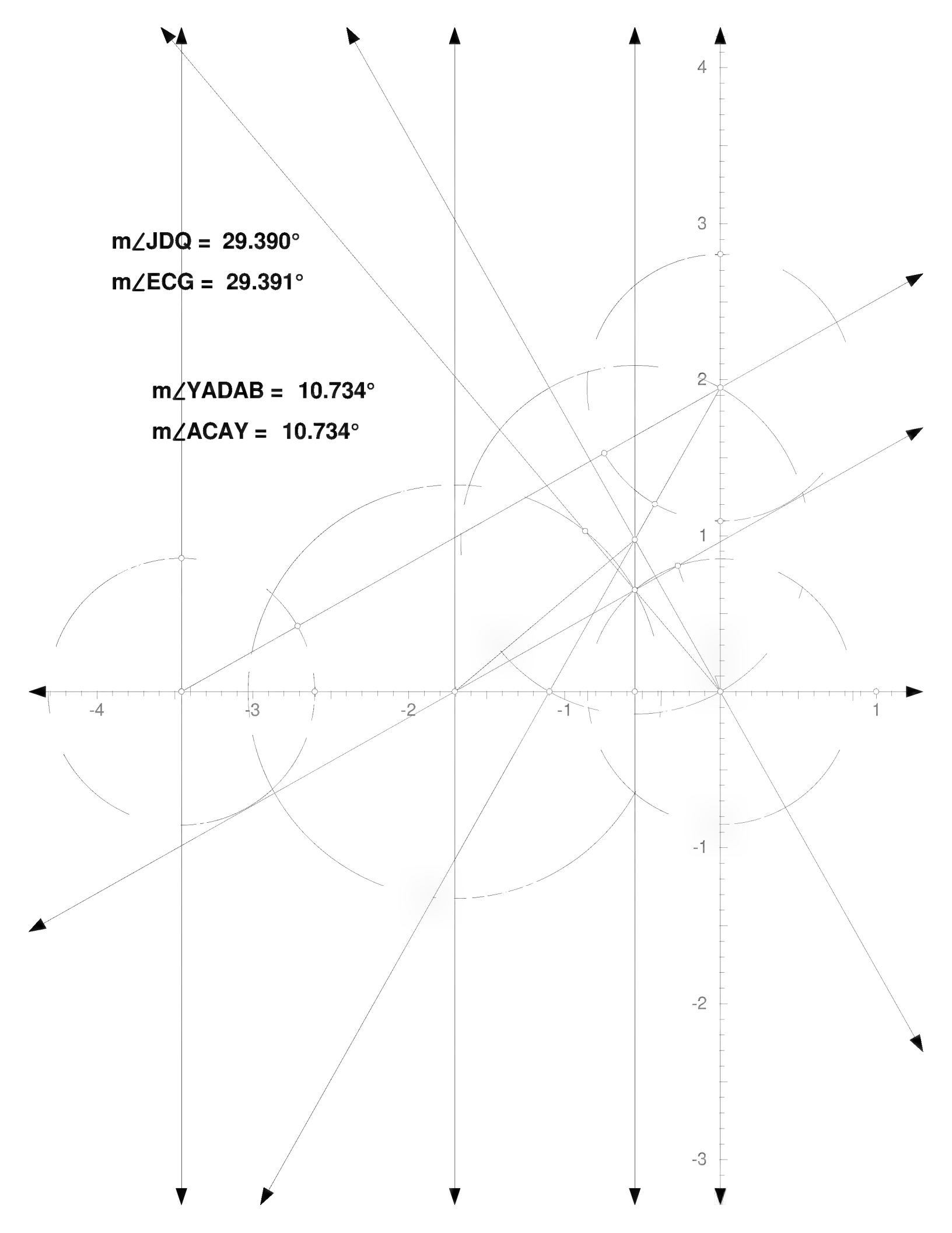

▲ Show
△ Hide
m∠Pull MeEA = 73.420°
Pull Me
m∠Pull MeAC = 56.840°
BFA = 3.535 inches
BMA = 3.526 inches

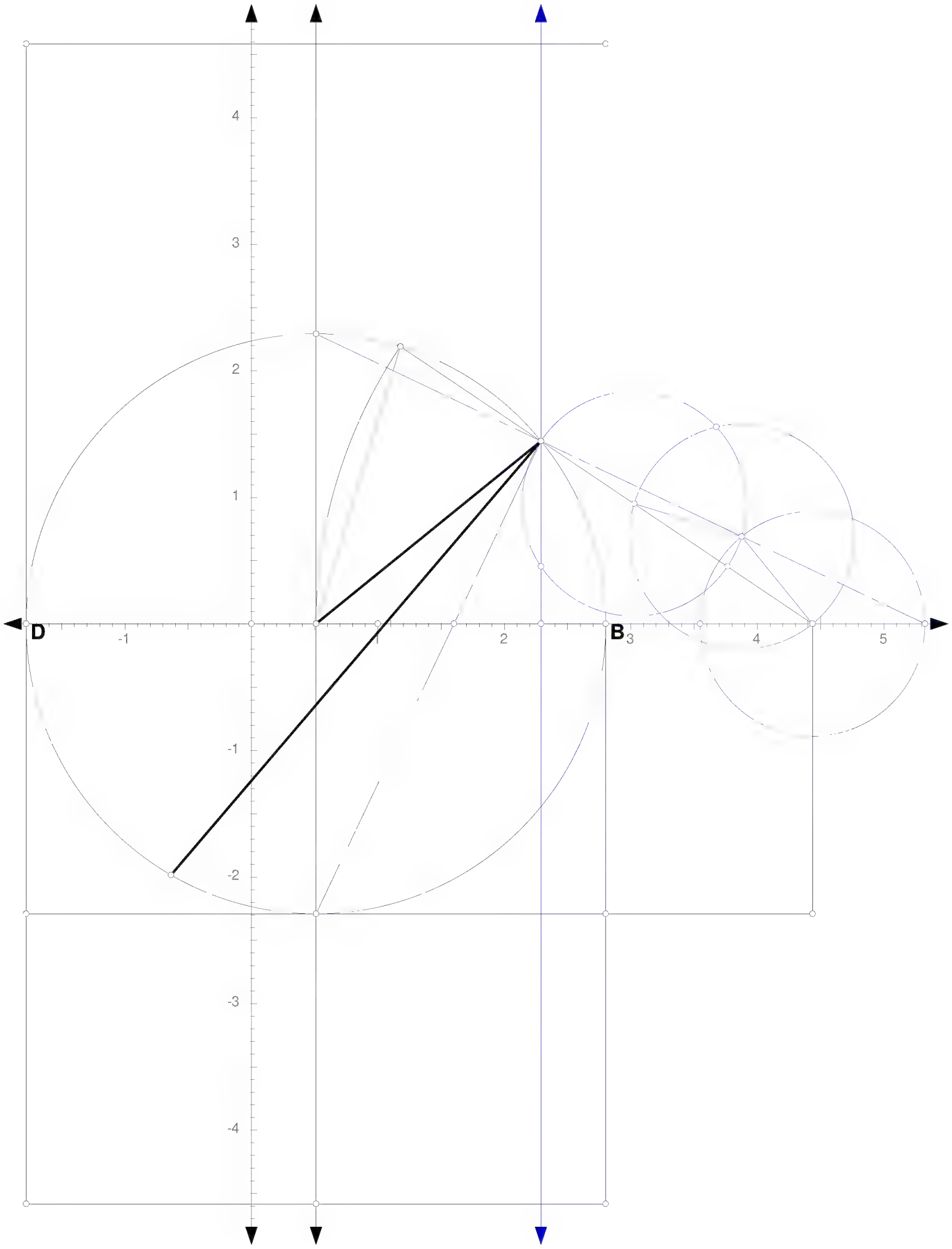

4
3
2
1
-1
-2
-3
-4
-4
-3
-2
-1
1
2

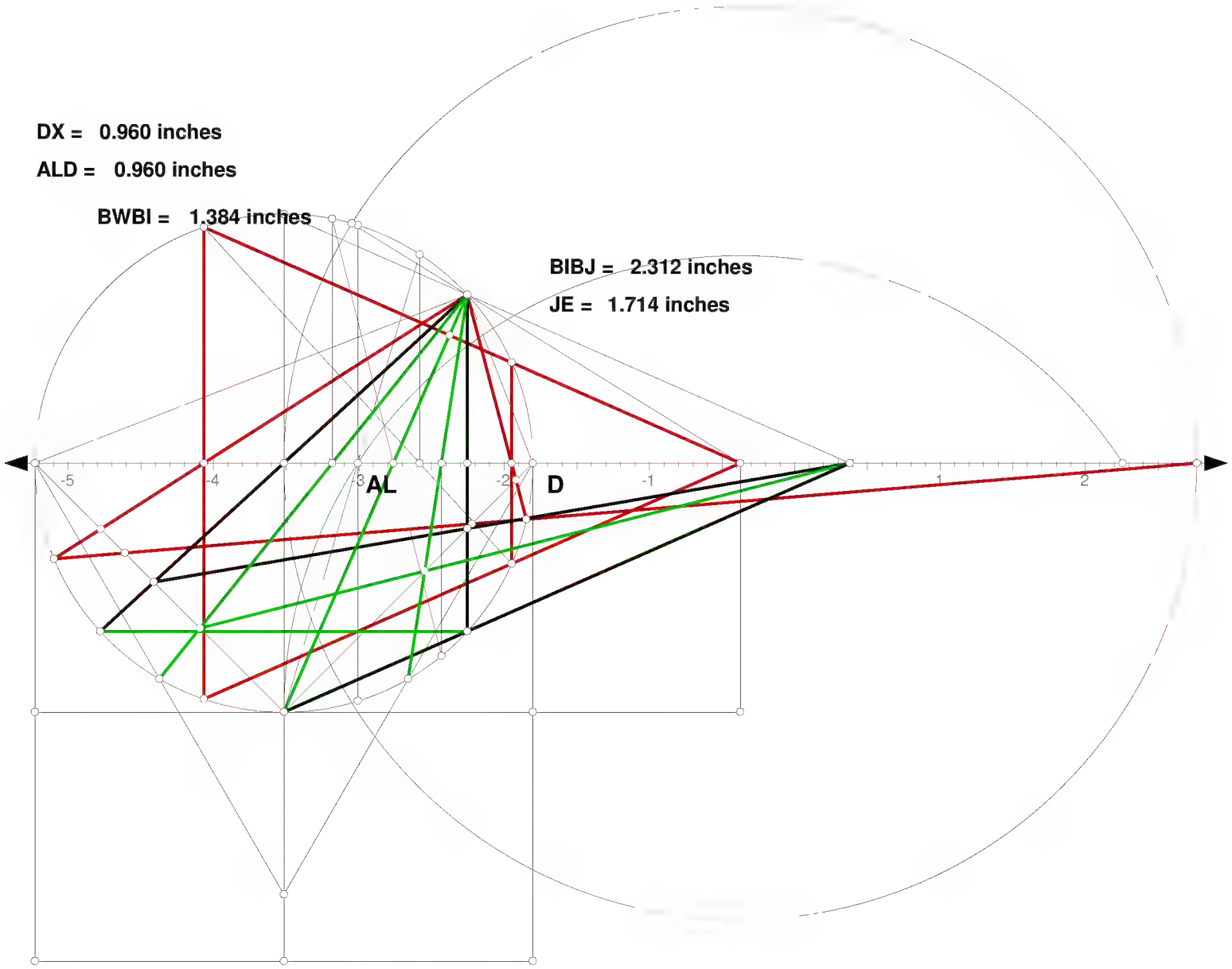

m∠IAC = 73.939°
m∠GAC = 48.183°
m∠IAC / m∠GAC = 1.535


m∠GEF = 49.958°
m∠KEJ = 16.652°
m∠GEF / m∠KEJ = 3.000
(m∠EAD / 4) ·3 = 49.958°
m∠AAAE = 83.263°
m∠DAAA = 16.653°
m∠AAAE / m∠DAAA = 5.000
m∠GEA = 23.390°
m∠ABNW = 24.979°
m∠EAD = 66.610°
m∠EAD = 66.610°
(m∠GEF / 3) ·4 = 66.610°
((m∠EAD / 4) ·3) - m∠GEF = 0.000°
C
E
F
J
K
D
G
A


m∠ANAHC = 58.583°
m∠AOAHC = 14.646°
m∠ANAHC / m∠AOAHC = 4.000

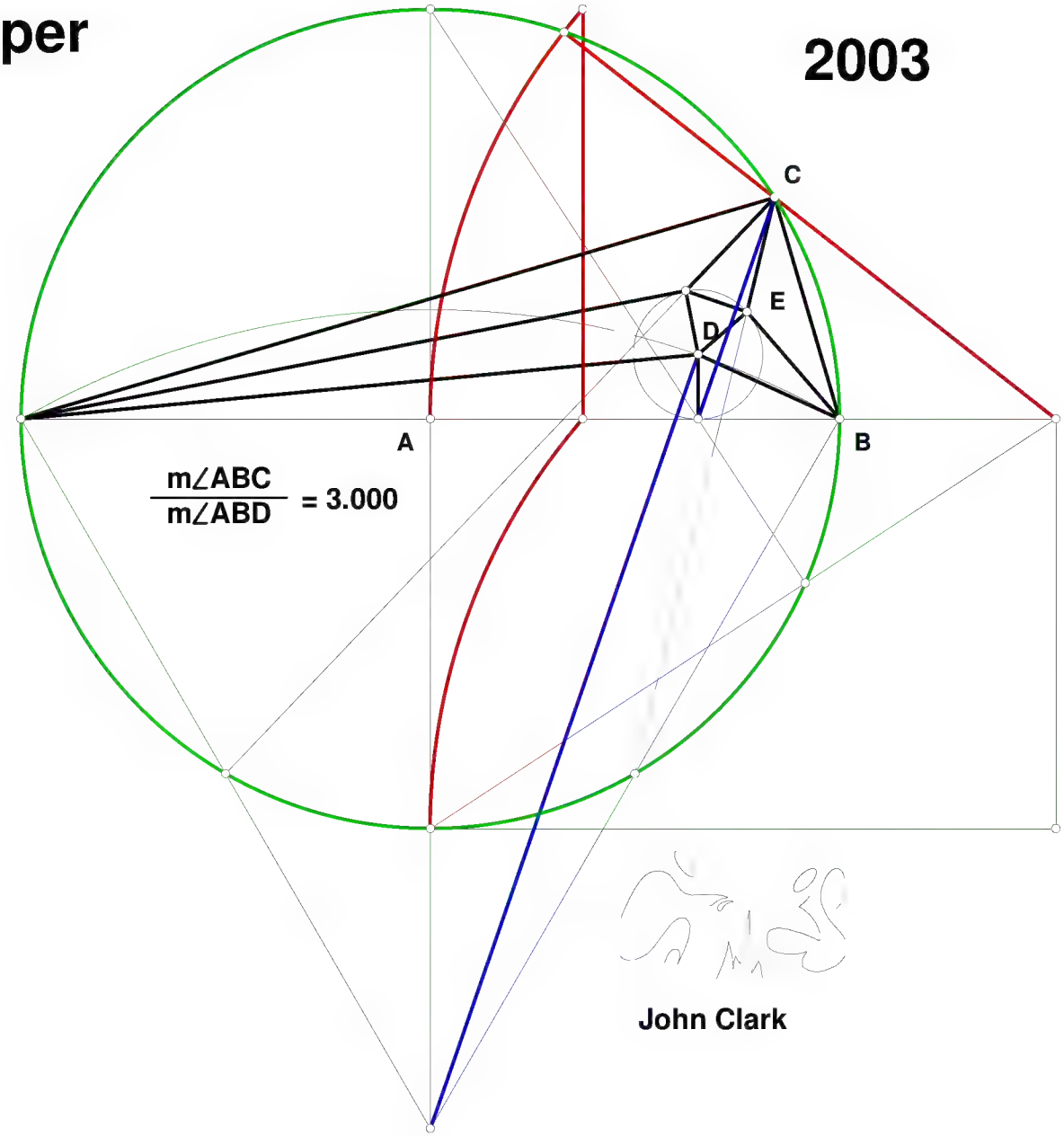

m∠JDQ = 29.390°
m∠ECG = 29.391°
m∠YADAB = 10.734°
m∠ACAY = 10.734°
4
3
2
1
-1
-2
-3
-4
-3
-2
-1
1


4
3
2
1
D
-1
1
2
B
3
4
5
-1
-2
-3
-4


DX = 0.960 inches
ALD = 0.960 inches
BWBI = 1.384 inches
BIBJ = 2.312 inches
JE = 1.714 inches
-5
-4
-3
AL
-2
D
-1
1
2

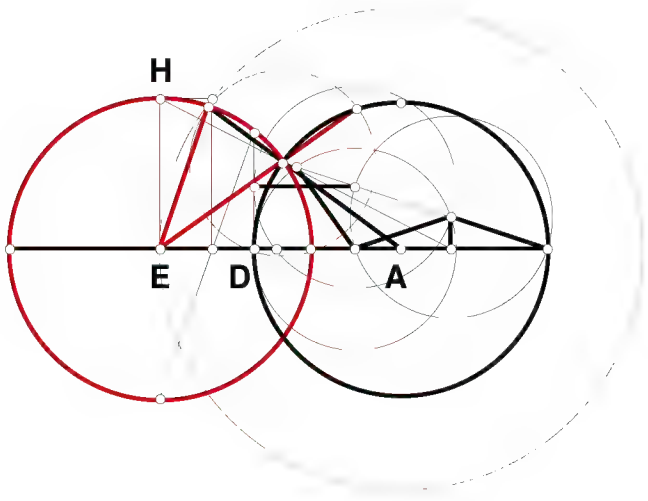
Three Pieces Of Paper

2003

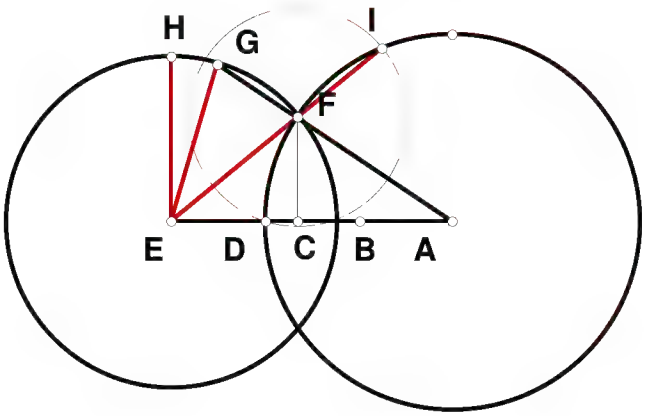


John Clark

021603



From AD project a trisection to EH.



$AD := .969 \quad AB := \frac{AD}{2} \quad N := 1.51$

$BD := AD - AB \quad BC := \frac{BD}{N}$

$CD := BD - BC \quad AC := AB + BC$

$AF := AD \quad CF := \sqrt{AF^2 - AC^2}$

$FI := \sqrt{CD^2 + CF^2}$

$DI := 2 \cdot CF \quad AI := AD$

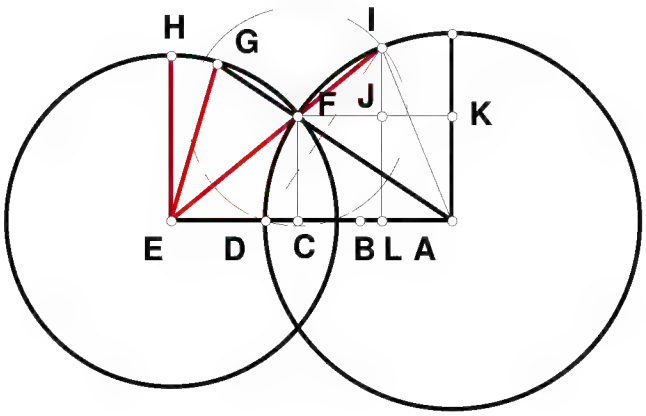
$AL := \frac{\left(2\ AD^2 - DI^2\right)}{2 \cdot AD}$

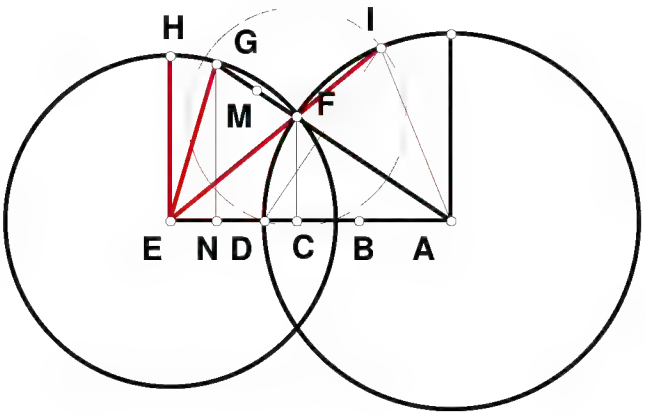
$FJ := AC - AL \quad IL := \sqrt{AI^2 - AL^2}$

$IJ := IL - CF \quad EL := \frac{FJ \cdot IL}{IJ}$

$AE := AL + EL \quad EI := \frac{FI \cdot IL}{IJ}$

$EF := EI - FI$





$$FG := \frac{EF^2 + AF^2 - AE^2}{-AF}$$

$$AG := AF + FG$$

$$AN := \frac{AC \cdot AG}{AF}$$

$$EN := AE - AN \quad FM := \frac{FG}{2}$$

$$FM - EN = 0$$

Some Algebraic Names;

$$BC - \frac{AD - AB}{N} = 0 \qquad CD - (N-1)\cdot\frac{(AD - AB)}{N} = 0 \qquad AC - \frac{(AB \cdot N + AD - AB)}{N} = 0$$

$$CF - \frac{\sqrt{(N-1)\cdot(AD - AB)\cdot(AD \cdot N + AD - AB + AB \cdot N)}}{N} = 0$$

$$FI - \sqrt{2}\cdot\sqrt{(N-1)\cdot(AD - AB)\cdot\frac{AD}{N}} = 0$$

$$DI - 2\cdot\frac{\sqrt{(N-1)\cdot(AD - AB)\cdot(AD \cdot N + AD - AB + AB \cdot N)}}{N} = 0$$

$$AL - \frac{-\left(AD^2 \cdot N^2 - 4 \cdot AD \cdot N \cdot AB + 4 \cdot AB^2 \cdot N - 2 \cdot N^2 \cdot AB^2 - 2 \cdot AD^2 + 4 \cdot AD \cdot AB - 2 \cdot AB^2\right)}{\left(AD \cdot N^2\right)} = 0$$

$$FJ - (N-1)\cdot(AD - AB)\cdot\frac{(AD \cdot N + 2 \cdot AD - 2 \cdot AB + 2 \cdot AB \cdot N)}{\left(AD \cdot N^2\right)} = 0$$

$$IL - \frac{(AB \cdot N + AD - AB)}{\left(AD \cdot N^2\right)}\cdot\sqrt{4}\cdot\sqrt{(N-1)\cdot(AD - AB)\cdot(AD \cdot N + AD - AB + AB \cdot N)} = 0$$

$$IJ - -\sqrt{(N-1)\cdot(AD - AB)\cdot(AD \cdot N + AD - AB + AB \cdot N)}\cdot\frac{(-2 \cdot AB \cdot N - 2 \cdot AD + 2 \cdot AB + AD \cdot N)}{\left(AD \cdot N^2\right)} = 0$$

$$EL - \frac{-2\cdot(N-1)\cdot(AD-AB)\cdot(AD\cdot N+2\cdot AD-2\cdot AB+2\cdot AB\cdot N)\cdot(AB\cdot N+AD-AB)}{AD\cdot\left[N^2\cdot(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)\right]}=0$$

$$AE - -AD^2\cdot\frac{N}{(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)}=0$$

$$EI - 2\cdot\sqrt{2}\cdot\sqrt{(N-1)\cdot(AD-AB)\cdot\frac{AD}{N}}\cdot\frac{(AB\cdot N+AD-AB)}{(2\cdot AB\cdot N+2\cdot AD-2\cdot AB-AD\cdot N)}=0$$

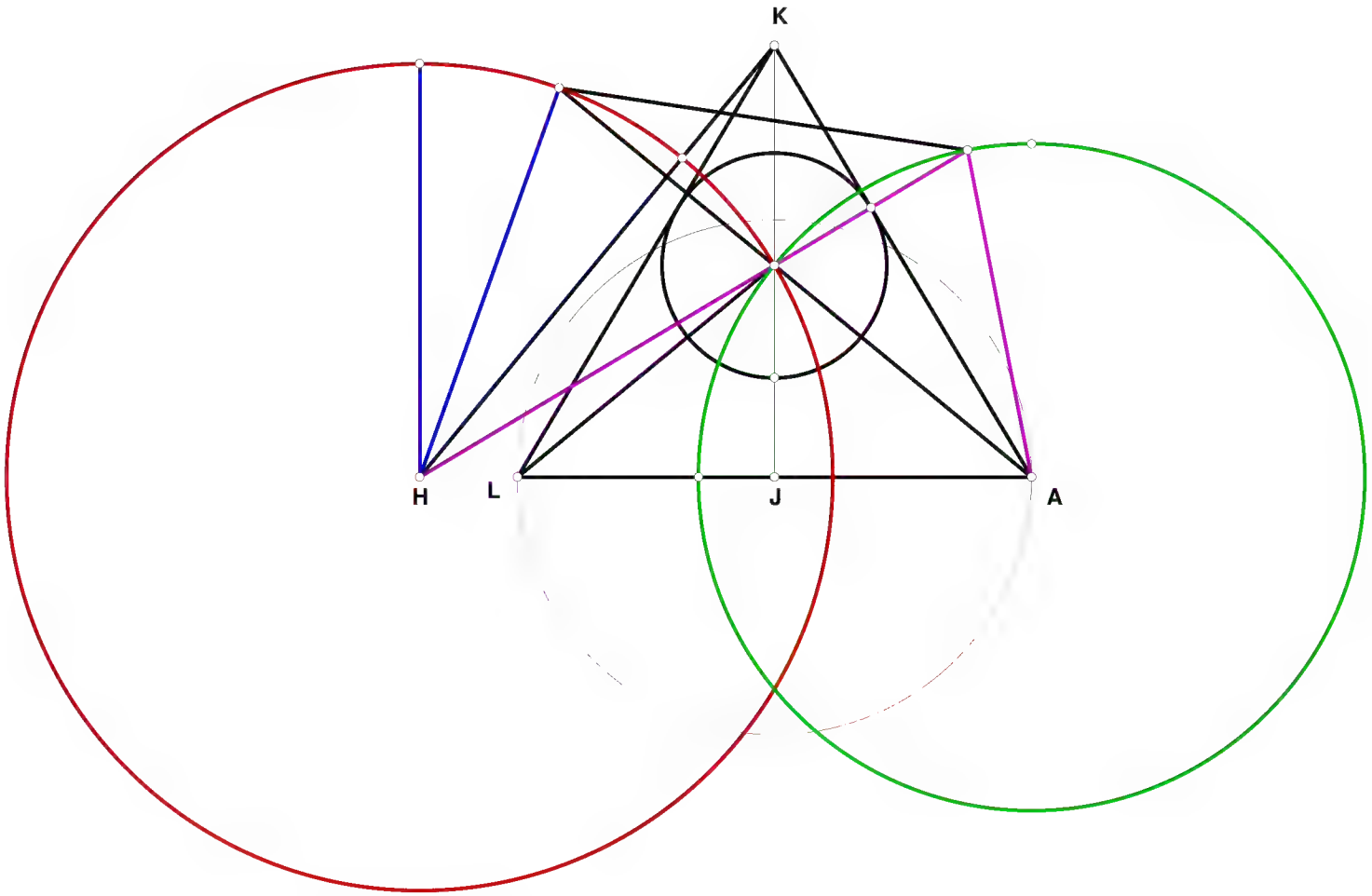
$$EF - -\sqrt{2}\cdot\sqrt{(N-1)\cdot(AD-AB)\cdot\frac{AD}{N}}\cdot AD\cdot\frac{N}{(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)}=0$$

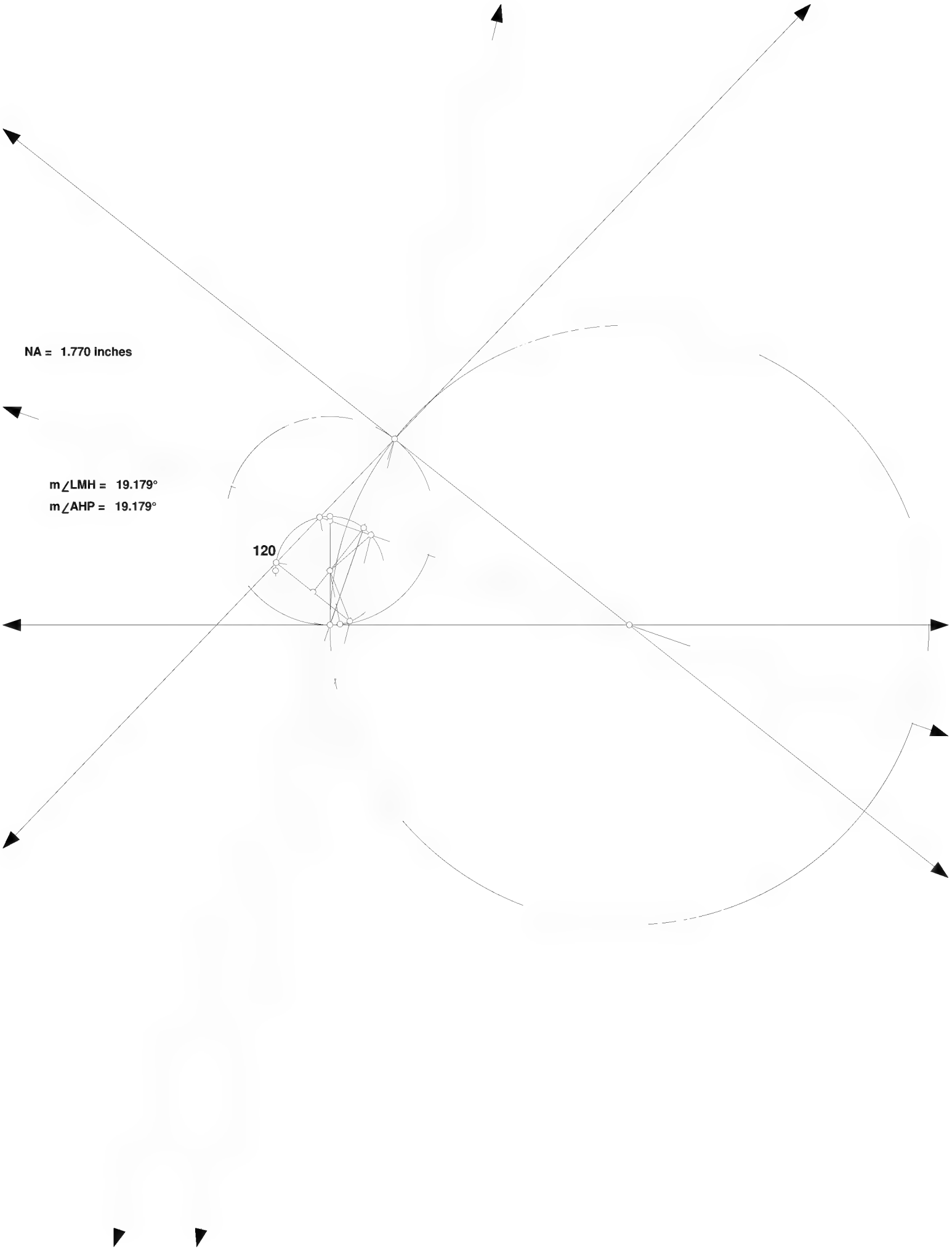
$$FG - -2\cdot AD\cdot(AD-AB)\cdot\frac{(N-1)}{(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)}=0$$

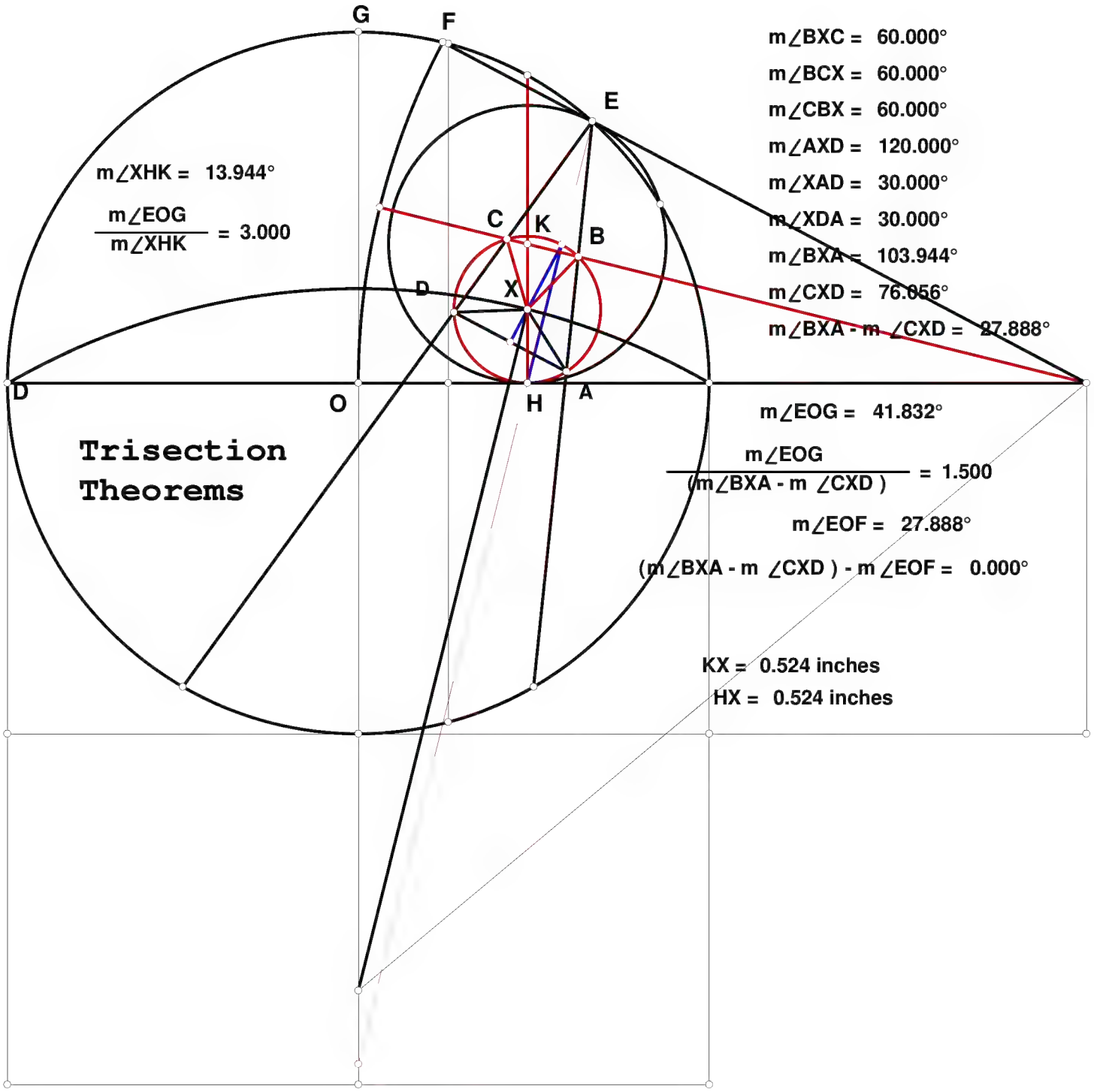
$$AG - -AD^2\cdot\frac{N}{(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)}=0$$

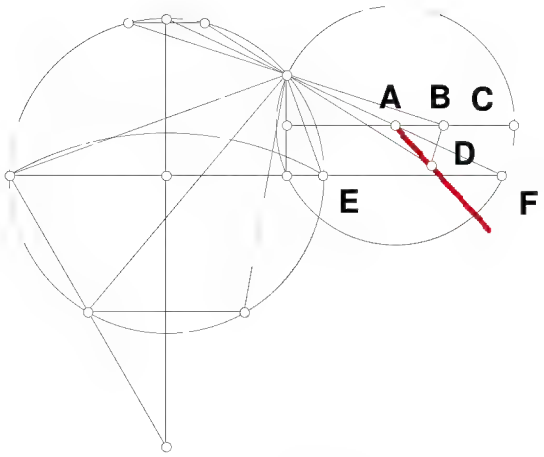
$$AN - (AB\cdot N+AD-AB)\cdot\frac{AD}{(2\cdot AB\cdot N+2\cdot AD-2\cdot AB-AD\cdot N)}=0$$

$$EN - -AD\cdot(N-1)\cdot\frac{(AD-AB)}{(-2\cdot AB\cdot N-2\cdot AD+2\cdot AB+AD\cdot N)}=0 \qquad FM - EN = 0$$


K
H
L
J
A

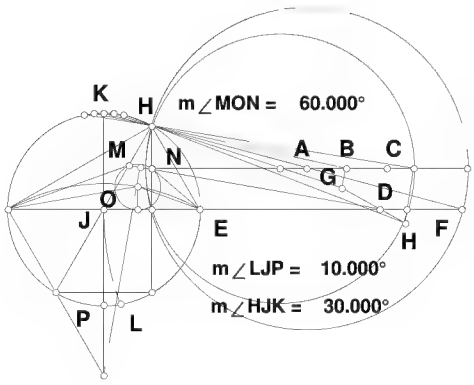

NA = 1.770 inches
m∠LMH = 19.179°
m∠AHP = 19.179°
120


G
F
E
C
K
B
D
X
D
O
H
A
Trisection
Theorems
m∠BXC = 60.000°
m∠BCX = 60.000°
m∠CBX = 60.000°
m∠AXD = 120.000°
m∠XAD = 30.000°
m∠XDA = 30.000°
m∠BXA = 103.944°
m∠CXD = 76.056°
m∠BXA - m ∠CXD = 27.888°
m∠XHK = 13.944°
m∠EOG / m∠XHK = 3.000
m∠EOG = 41.832°
m∠EOG / (m∠BXA - m ∠CXD) = 1.500
m∠EOF = 27.888°
(m∠BXA - m ∠CXD) - m∠EOF = 0.000°
KX = 0.524 inches
HX = 0.524 inches



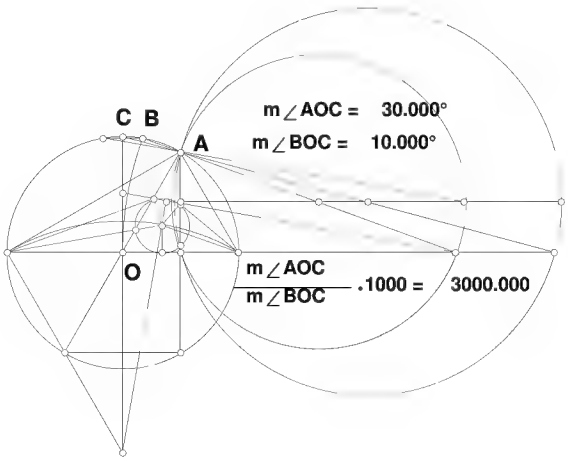
022803

If D were between EF, then it would be the point sought for angle trisection. When is moved between A and C the locus AD is formed. This locus is not straight, but it is fairly straight.

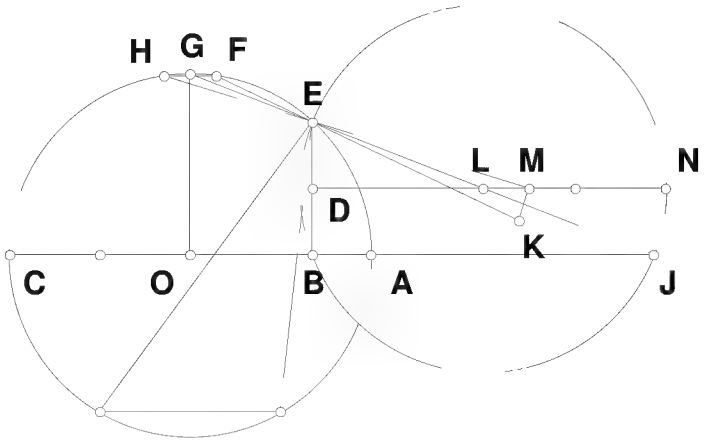


Even if a large segment is used from two points on AD, say GH for an intercept, this drawing program claims that I have attained a trisection for any angle.

If a very small segment is taken, as below, tolerance is beyond the drawing program. What does it look like using Algebra? Trisection to within millionths, in some circumstances, may be tolerable.



As the different points of intersection is no actually viewable on the finer figure, the rougher figure will be used for drawings, but the equations will refer to the finer.



$N_1 := 1 \qquad N_2 := 4$

$N_3 := 2$

$AC := N_1 \quad AO := \frac{AC}{2}$

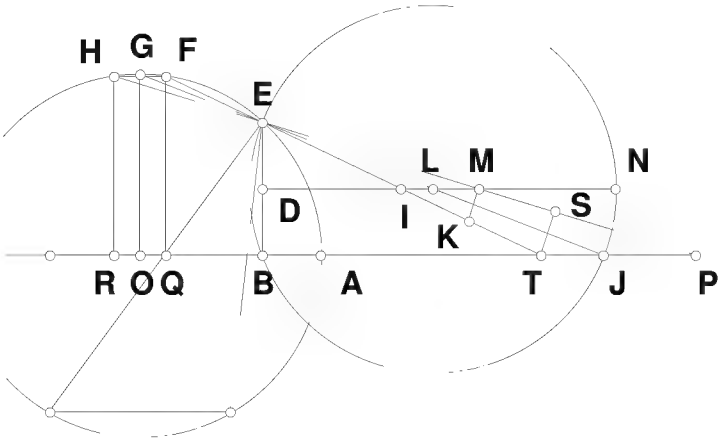
$AB := \frac{AC}{N_2} \quad BC := AC - AB$

$BE := \sqrt{AB \cdot BC} \quad DE := \frac{BE}{2}$

$BO := AO - AB \quad GO := AO$

$DL := \frac{BO \cdot DE}{GO - BE} \quad EL := \sqrt{DL^2 + DE^2}$

$LN := EL \quad LM := \frac{LN}{N_3} \quad DM := DL + LM \quad EM := \sqrt{DE^2 + DM^2} \quad EP := \frac{EM \cdot BE}{DE}$



$BP := \frac{DM \cdot BE}{DE} \quad PO := BP + BO$

$EH := \frac{AO^2 + EP^2 - PO^2}{-EP}$

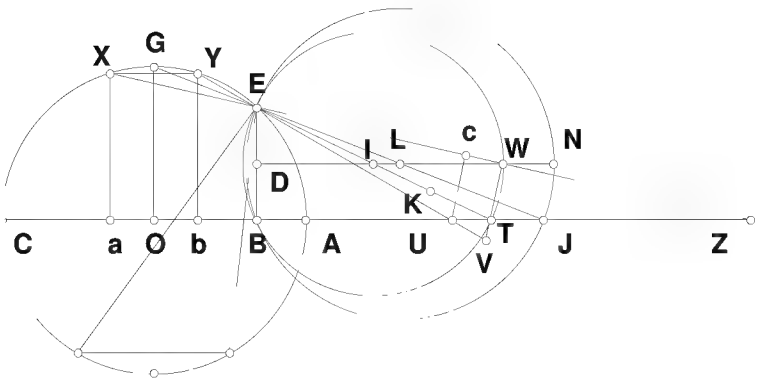
$HP := EP + EH \quad PR := \frac{BP \cdot HP}{EP}$

$OR := PR - PO \quad BQ := BO - OR$

$HR := \frac{BE \cdot HP}{EP} \quad BT := \frac{BQ \cdot BE}{HR - BE}$

$ET := \sqrt{BE^2 + BT^2} \quad PT := BP - BT \quad PS := \frac{PT^2 + EP^2 - ET^2}{2 \cdot EP} \quad ES := EP - PS \quad ST := \sqrt{ET^2 - ES^2}$

$KM := \frac{ST \cdot EM}{ES} \quad EI := \frac{ET}{2} \quad EK := \frac{ET \cdot EM}{ES} \quad OT := BT + BO$



$$IW := EI \quad DI := \sqrt{EI^2 - DE^2}$$

$$DW := DI + IW$$

$$EW := \sqrt{DE^2 + DW^2}$$

$$EZ := \frac{EW \cdot BE}{DE} \quad BZ := \frac{DW \cdot BE}{DE}$$

$$OZ := BZ + BO$$

$$TW := \sqrt{ET^2 - EW^2}$$

$$EX := \frac{AO^2 + EZ^2 - OZ^2}{-EZ} \quad XZ := EZ + EX \quad Za := \frac{BZ \cdot XZ}{EZ} \quad Oa := Za - OZ \quad Bb := BO - Oa$$

$$Xa := \frac{BE \cdot XZ}{EZ} \quad BU := \frac{Bb \cdot BE}{Xa - BE} \quad EU := \sqrt{BE^2 + BU^2} \quad UZ := BZ - BU \quad Zc := \frac{UZ^2 + EZ^2 - EU^2}{2 \cdot EZ}$$

$$Uc := \sqrt{UZ^2 - Zc^2} \quad VW := \frac{Uc \cdot EW}{EZ - Zc} \quad OU := BU + BO$$

$$IM := DM - DI \quad IK := EK - EI$$

$$Ig := \frac{IK^2 + IM^2 - KM^2}{2 \cdot IM}$$

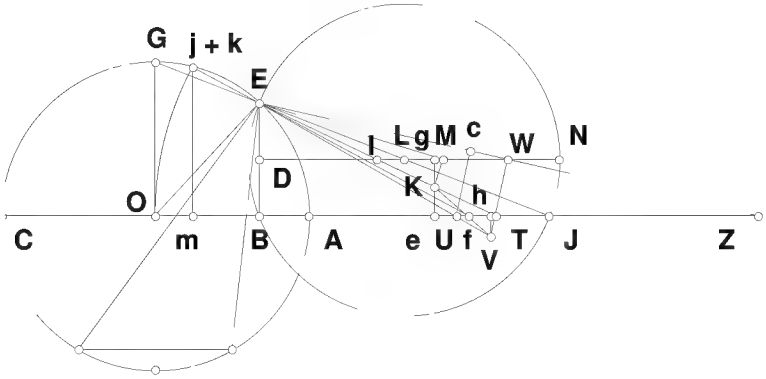
$$EV := \frac{EU \cdot EW}{EZ - Zc}$$

$$TU := OT - OU$$

$$UV := EV - EU$$

$$TV := VW - TW$$

$$Uh := \frac{UV^2 + TU^2 - TV^2}{2 \cdot TU}$$



$$Kg := \sqrt{IK^2 - Ig^2} \quad Ke := DE - Kg \quad Vh := \sqrt{UV^2 - Uh^2} \quad Dg := DI + Ig \quad Bh := BU + Uh$$

$$eh := Bh - Dg \quad Ke := DE - Kg \quad ef := \frac{eh \cdot Ke}{(Ke + Vh)} \quad Bf := Dg + ef \quad Of := Bf + BO$$

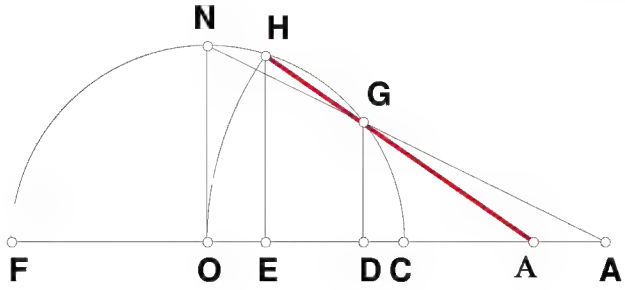
$$Om := \frac{AO^2}{2 \cdot Of} \quad Ej := \frac{AO^2}{Of} \quad Om - \frac{Ej}{2} = 0 \quad Ef := \sqrt{BE^2 + Bf^2} \quad Ek := \frac{AO^2 + Ef^2 - Of^2}{-Ef}$$

$$Om - \frac{Ek}{2} = -0.000000000002639 \quad \frac{Ek}{Ej} = 1.000000000030396$$

And so the Trisection is accurate to within a few decimal places. 30 degree angle shown.

The Gravitating Answer. 030503

How many itterations to go beyond 15 decimal place precision in trisection? The itteration is from AO where GH determines a new A.



$$\Delta := 22 \qquad \delta := 0 .. \Delta \qquad N := 2$$

$$CF := 1 \qquad CO := \frac{CF}{2}$$

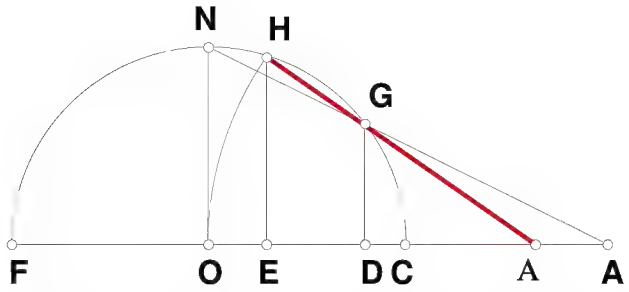
$$CD := \frac{CO}{N} \qquad DO := CO - CD$$

$$DF := DO + CO \qquad DG := \sqrt{CD \cdot DF}$$

$$AD_0 := \frac{DO \cdot DG}{CO - DG} \qquad AO_0 := AD_0 + DO \qquad EO_0 := \frac{CO^2}{2 \cdot (AD_0 + DO)} \qquad DE_0 := DO - EO_0$$

$$EH_0 := \sqrt{(CO + EO_0) \cdot (CO - EO_0)}$$

$$\begin{bmatrix} AD_{\delta+1} \\ AO_{\delta+1} \\ EO_{\delta+1} \\ DE_{\delta+1} \\ EF_{\delta+1} \\ EH_{\delta+1} \end{bmatrix} := \begin{bmatrix} \frac{DE_\delta \cdot DG}{EH_\delta - DG} \\ \frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \\ \frac{CO^2}{2 \cdot \left(\frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \right)} \\ DO - \frac{CO^2}{2 \cdot \left(\frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \right)} \\ CO + \frac{CO^2}{2 \cdot \left(\frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \right)} \\ \sqrt{\left[CO - \frac{CO^2}{2 \cdot \left(\frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \right)} \right] \cdot \left[CO + \frac{CO^2}{2 \cdot \left(\frac{DE_\delta \cdot DG}{EH_\delta - DG} + DO \right)} \right]} \end{bmatrix}$$



$$AG := \sqrt{DG^2 + \left(AD_{\Delta}\right)^2}$$

$$GH := \frac{CO^2 + AG^2 - \left(AO_{\Delta}\right)^2}{-AG}$$

$$EO_{\Delta} - \frac{GH}{2} = 0$$

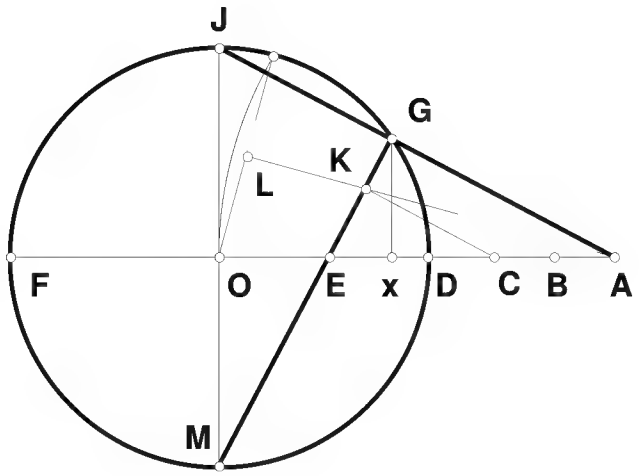
The displayed precision is for 15 decimal places. Trisection is beyond that. Since the physical world is quantitized, physical trisection is possible.

$EO_{\delta} - \frac{GH}{2}$	δ
-0.019836790725685	0
-0.004498504834066	1
-0.001019750164038	2
-0.000231158851096	3
-0.000052399460482	4
-0.000011877993414	5
-0.000002692522516	6
-0.000000610345304	7
-0.000000138354048	8
-0.000000031362317	9
-0.000000007109260	10
-0.000000001611539	11
-0.000000000365306	12
-0.000000000082808	13
-0.000000000018771	14
-0.000000000004255	15
-0.000000000000965	16
-0.000000000000219	17
-0.000000000000050	18
-0.000000000000011	19
$-2.789435349370706 \cdot 10^{-15}$	20
0	21
0	22

One can see how rapidly each recursion increases precision. And so, for any required precision, one can trisect an angle grearter than that, relatively rapidly--especially if one combine yesterdays plate with today's.

030803

Is anything saved by starting from a much more precise point for itteration demonstrated in 0305?



$$DF := 1 \qquad DO := \frac{DF}{2}$$

$$N := 2 \qquad Dx := \frac{DO}{N}$$

$$Ox := DO - Dx \qquad Fx := DF - Dx$$

$$Gx := \sqrt{Dx \cdot Fx} \qquad AO := \frac{Ox \cdot DO}{DO - Gx}$$

$$HO := DO \qquad LO := \frac{HO}{2}$$

$$Ex := \frac{Ox \cdot Gx}{Gx + DO} \qquad Ob := \frac{LO^2}{AO}$$

$$Lb := \sqrt{LO^2 - Ob^2} \qquad ab := \frac{Ex \cdot Lb}{Gx}$$

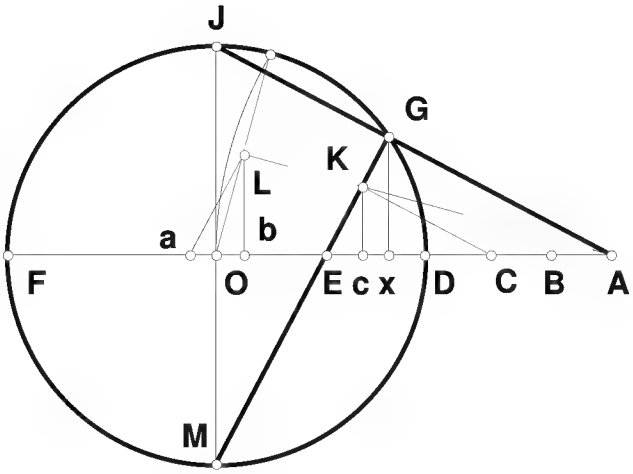
$$Aa := AO + ab - Ob$$

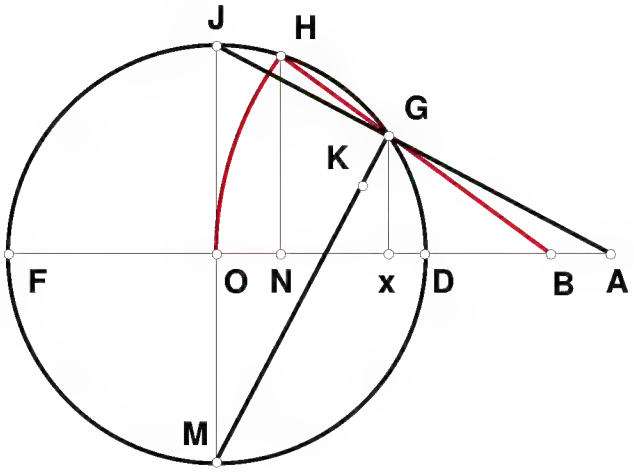
$$Ax := AO - Ox \qquad AE := Ax + Ex$$

$$Kc := \frac{Lb \cdot AE}{Aa} \qquad Cc := \frac{AO \cdot Kc}{DO}$$

$$Ec := \frac{ab \cdot AE}{Aa} \qquad CE := Cc + Ec \qquad AC := AE - CE$$

$$AB := \frac{AC}{2}$$





$$\Delta := 22 \qquad \delta := 0 .. \Delta$$

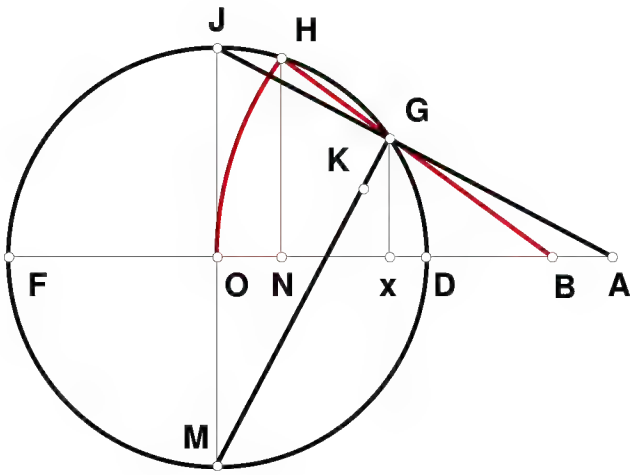
$$BO_0 := AO - AB$$

$$NO_0 := \frac{DO^2}{2\ BO_0}$$

$$Nx_0 := Ox - NO_0$$

$$HN_0 := \sqrt{(DO + NO_0) \cdot (DO - NO_0)}$$

$$\begin{bmatrix} BO_{\delta+1} \\ NO_{\delta+1} \\ Nx_{\delta+1} \\ HN_{\delta+1} \end{bmatrix} := \begin{bmatrix} \frac{Nx_\delta \cdot HN_\delta}{HN_\delta - Gx} + NO_\delta \\ \frac{DO^2}{2\left(\frac{Nx_\delta \cdot HN_\delta}{HN_\delta - Gx} + NO_\delta\right)} \\ Ox - \frac{DO^2}{2\left(\frac{Nx_\delta \cdot HN_\delta}{HN_\delta - Gx} + NO_\delta\right)} \\ \sqrt{\left[DO + \frac{DO^2}{2\left(\frac{Nx_\delta \cdot HN_\delta}{HN_\delta - Gx} + NO_\delta\right)}\right] \cdot \left[DO - \frac{DO^2}{2\left(\frac{Nx_\delta \cdot HN_\delta}{HN_\delta - Gx} + NO_\delta\right)}\right]} \end{bmatrix}$$



$$Bx_{\Delta} := BO_{\Delta} - Ox$$

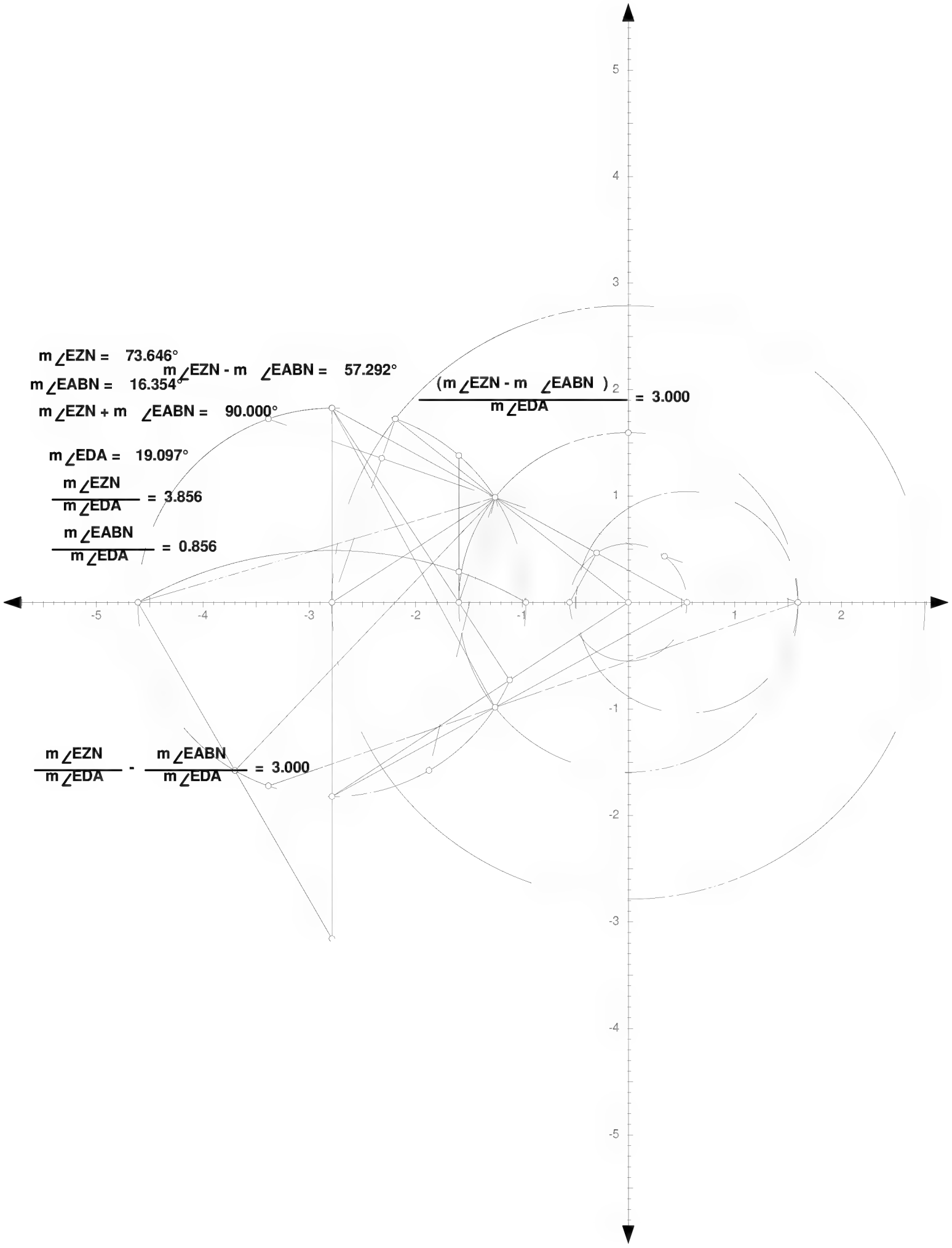
$$BG := \sqrt{Gx^2 + \left(Bx_{\Delta}\right)^2}$$

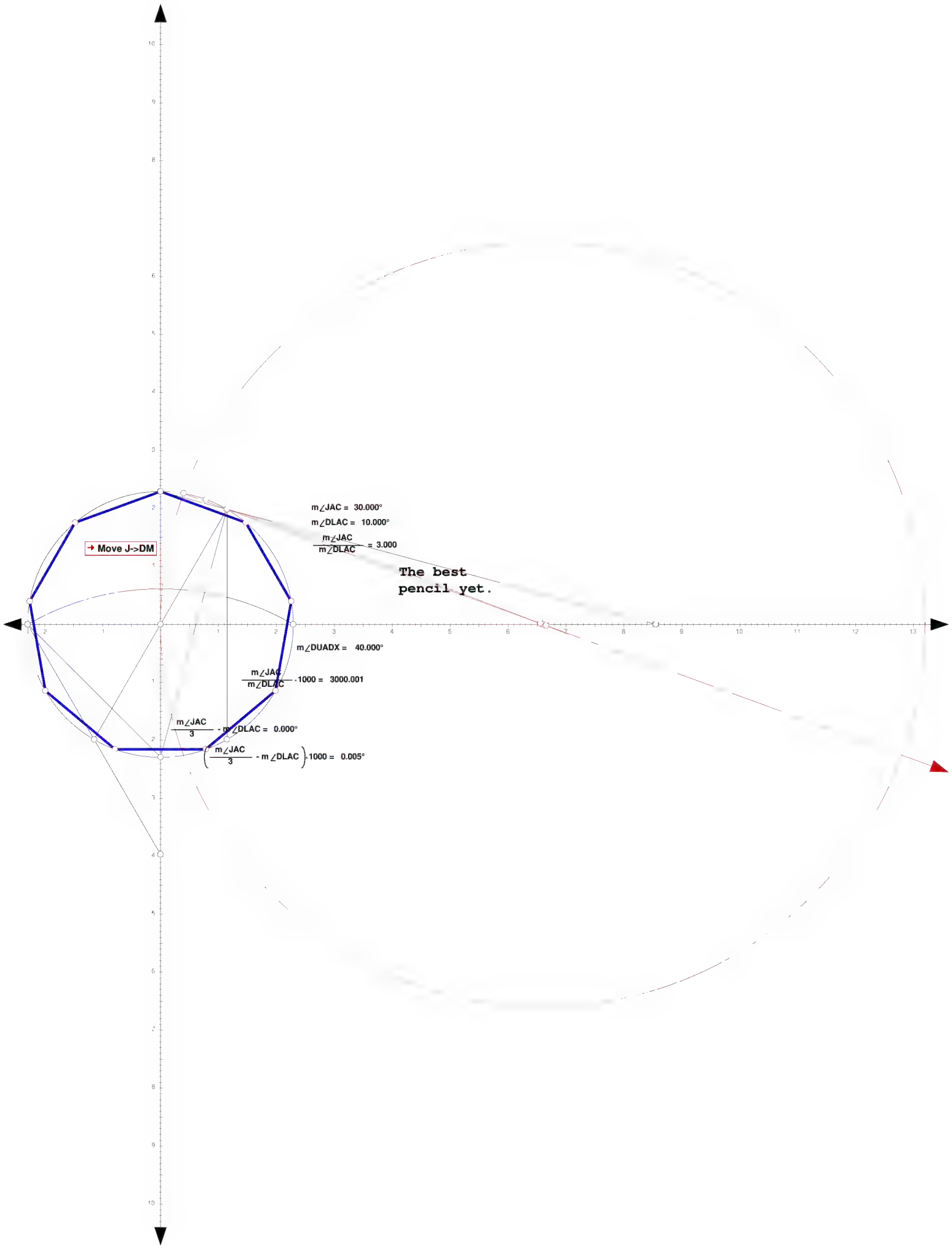
$$GH := \frac{DO^2 + BG^2 - \left(BO_{\Delta}\right)^2}{-BG}$$

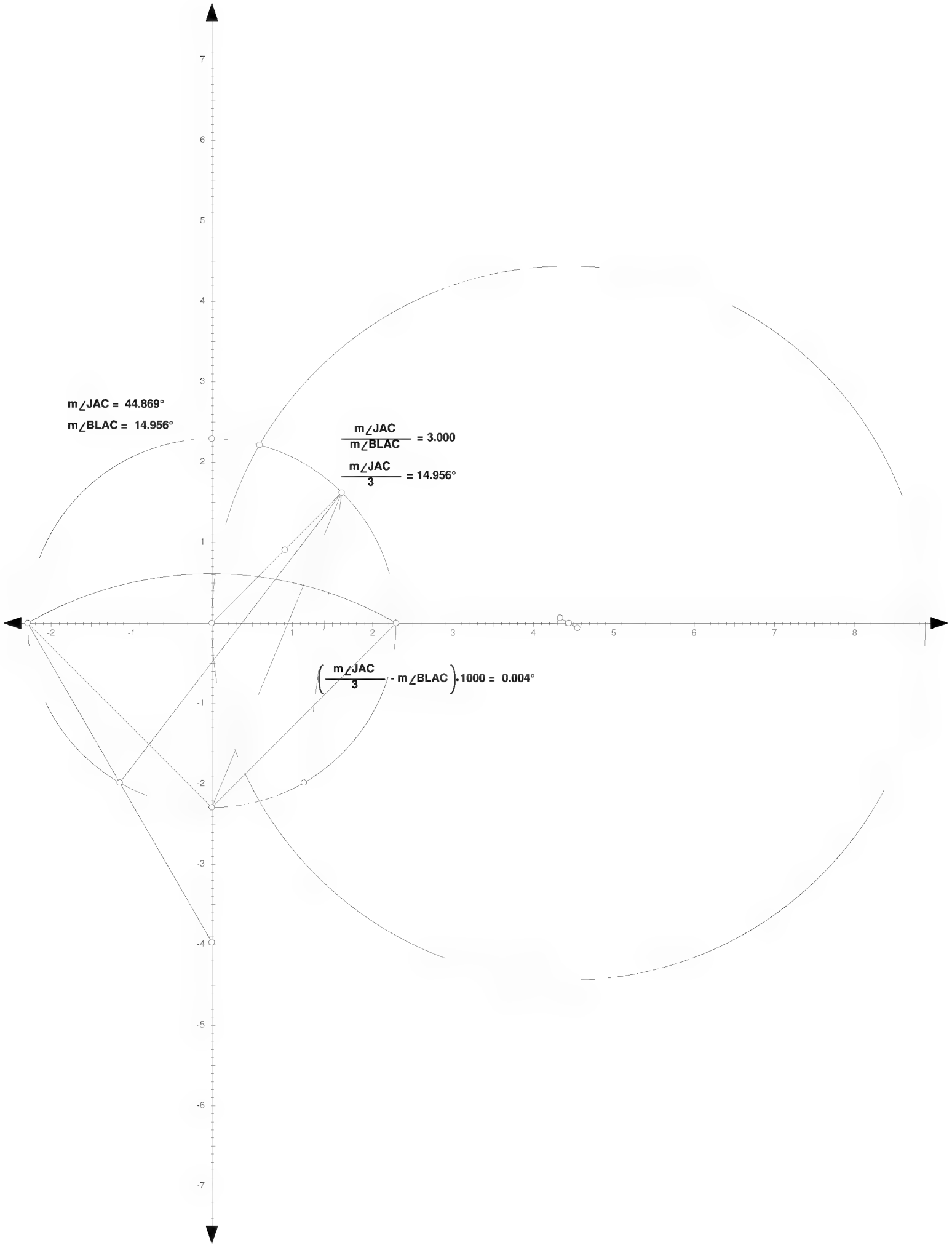
$$NO_{\Delta} - \frac{GH}{2} = 0$$

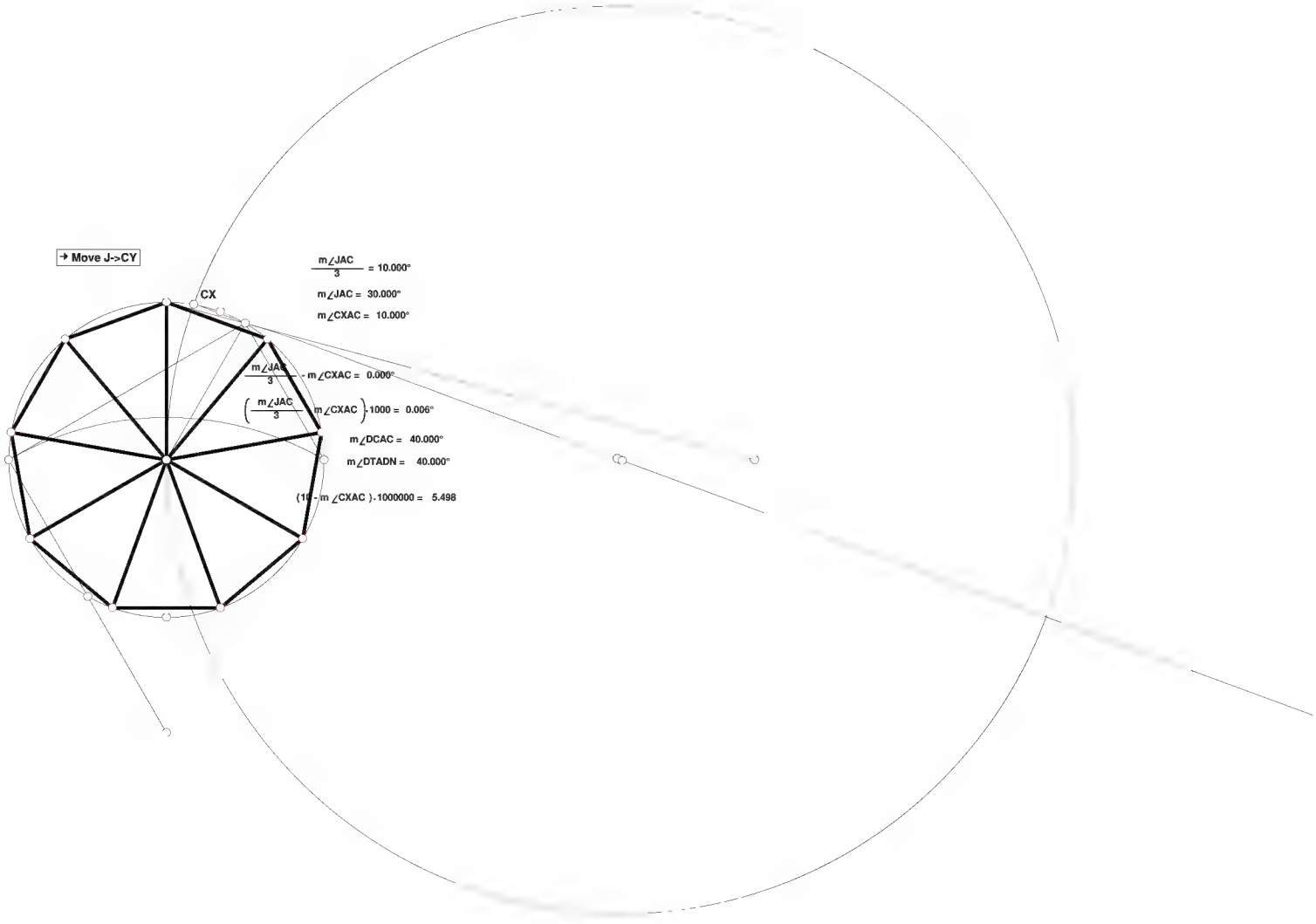
$NO_{\delta} - \frac{GH}{2}$	δ
-0.000733072475044	0
-0.000166174134206	1
-0.000037668619212	2
-0.000008538782769	3
-0.000001935584914	4
-0.000000438761479	5
-0.000000099459153	6
-0.000000022545559	7
-0.000000005110663	8
-0.000000001158493	9
-0.000000000262609	10
-0.000000000059529	11
-0.000000000013494	12
-0.000000000003059	13
-0.000000000000693	14
-0.000000000000157	15
-0.000000000000035	16
$-7.965850201685498 \cdot 10^{-15}$	17
$-1.706967900361178 \cdot 10^{-15}$	18
0	19
0	20
0	21
0	22

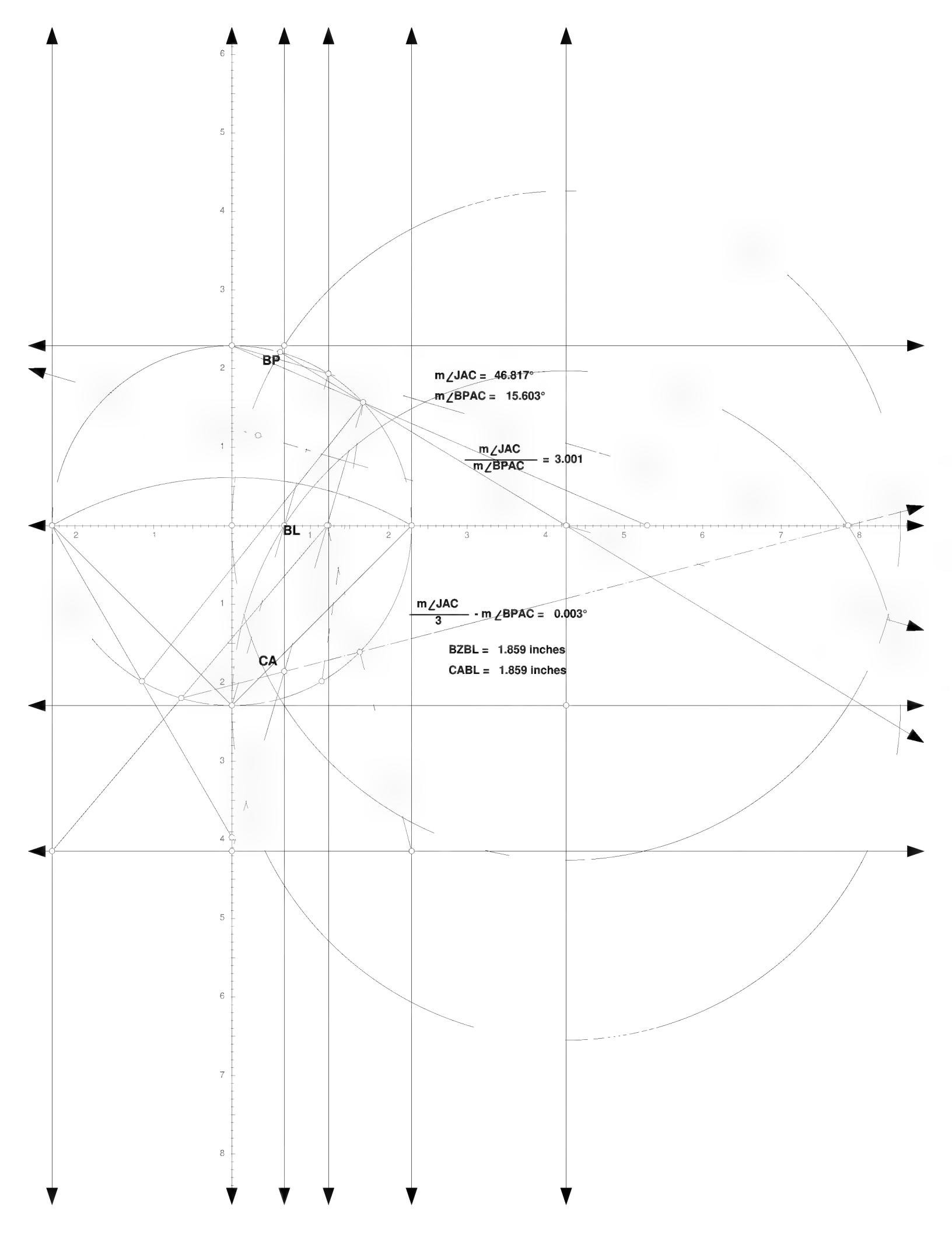
Although one starts off in a more precise spot, not much in the way of steps for 15 decimal place precision is saved. The steps are a waste of time.

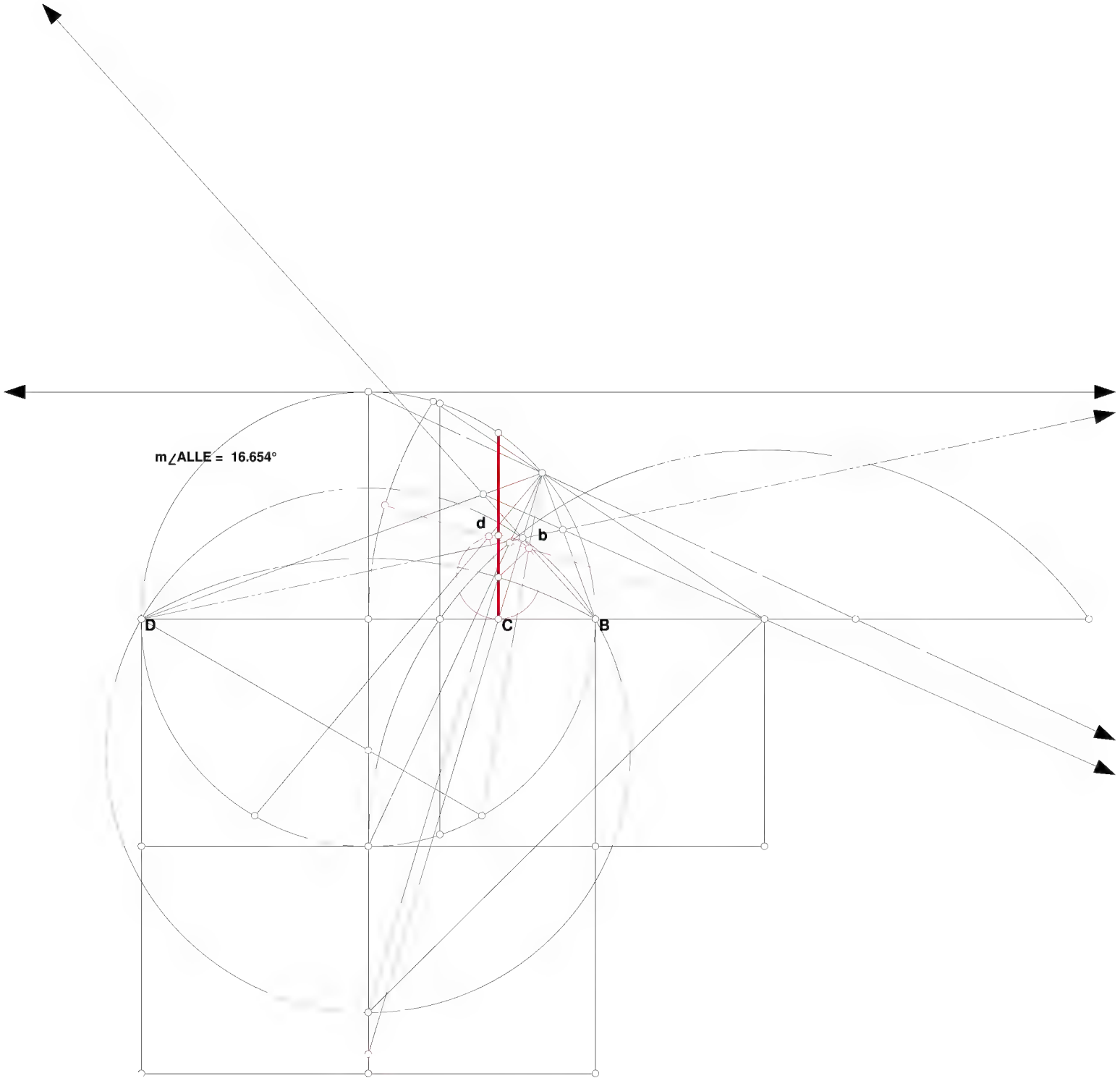

m∠EZN = 73.646°
m∠EABN = 16.354°
m∠EZN + m ∠EABN = 90.000°
m∠EZN - m ∠EABN = 57.292°
(m∠EZN - m ∠EABN) / m∠EDA = 3.000
m∠EDA = 19.097°
m∠EZN / m∠EDA = 3.856
m∠EABN / m∠EDA = 0.856
m∠EZN / m∠EDA - m∠EABN / m∠EDA = 3.000
5
4
3
2
1
-1
-2
-3
-4
-5
-5
-4
-3
-2
-1
1
2

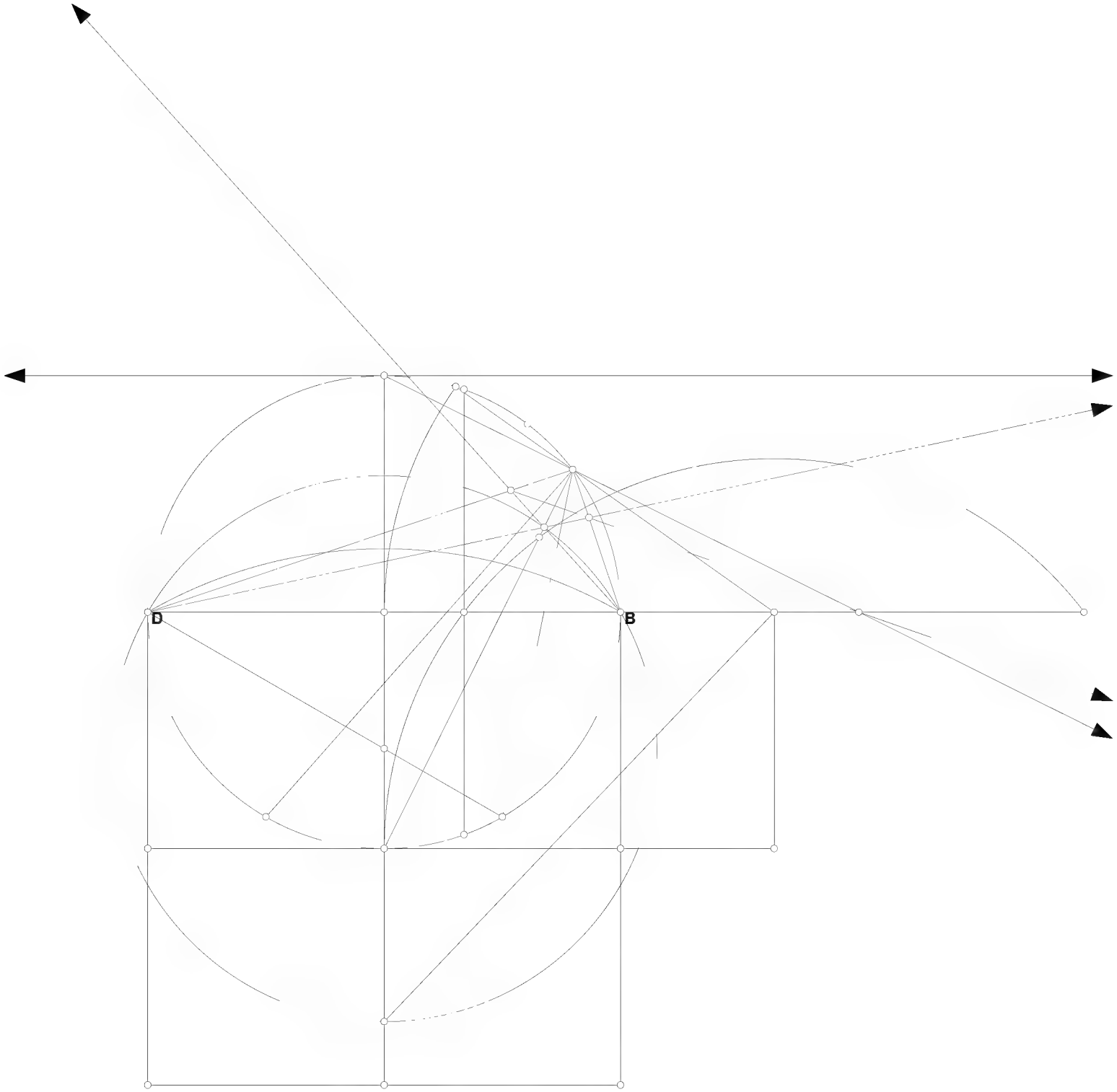

Move J->DM
m∠JAC = 30.000°
m∠DLAC = 10.000°
m∠JAC / m∠DLAC = 3.000
The best pencil yet.
m∠DUADX = 40.000°
m∠JAC / m∠DLAC ·1000 = 3000.001
m∠JAC / 3 - m∠DLAC = 0.000°
(m∠JAC / 3 - m∠DLAC) ·1000 = 0.005°

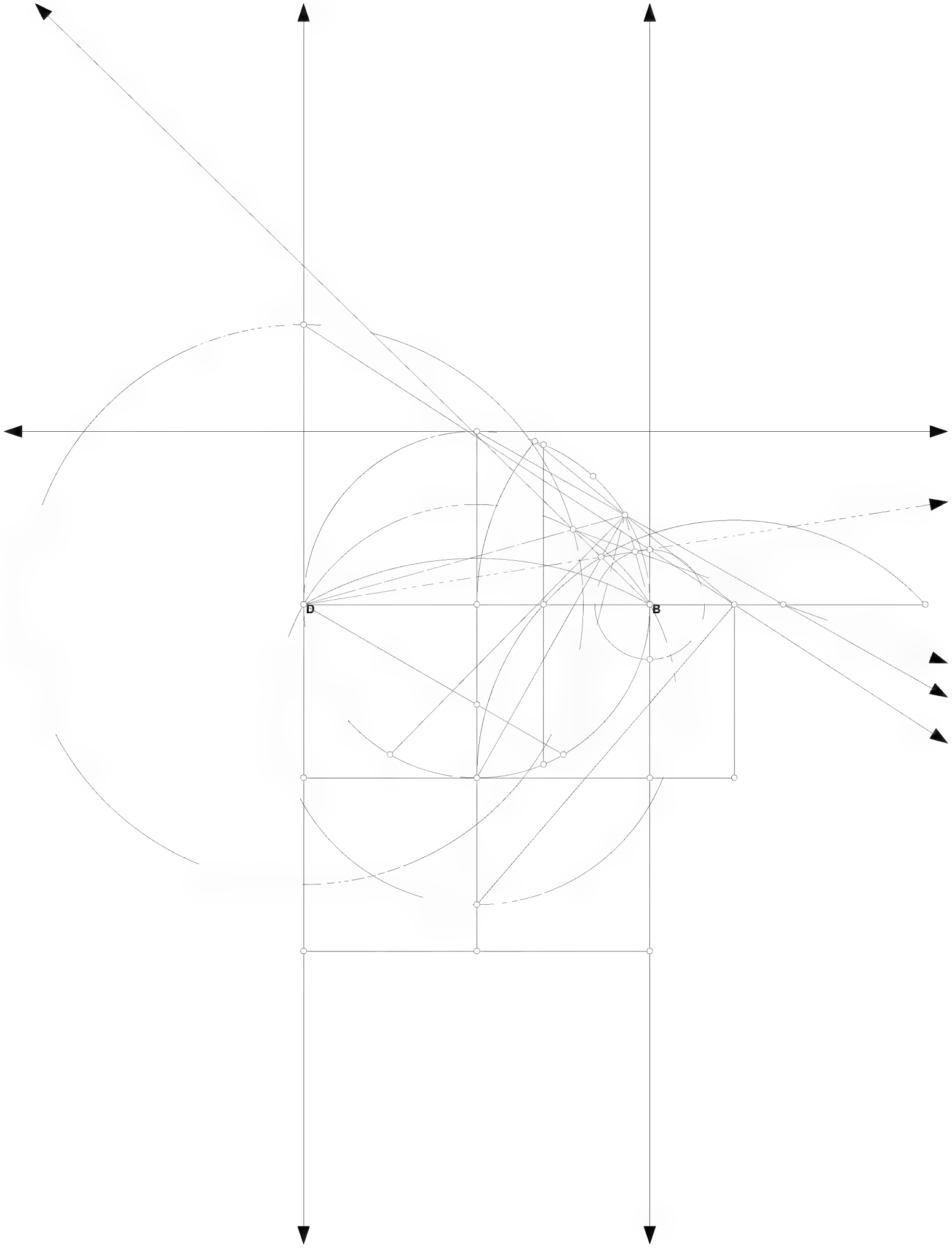

m∠JAC = 44.869°
m∠BLAC = 14.956°
m∠JAC / m∠BLAC = 3.000
m∠JAC / 3 = 14.956°
(m∠JAC / 3 - m∠BLAC)·1000 = 0.004°

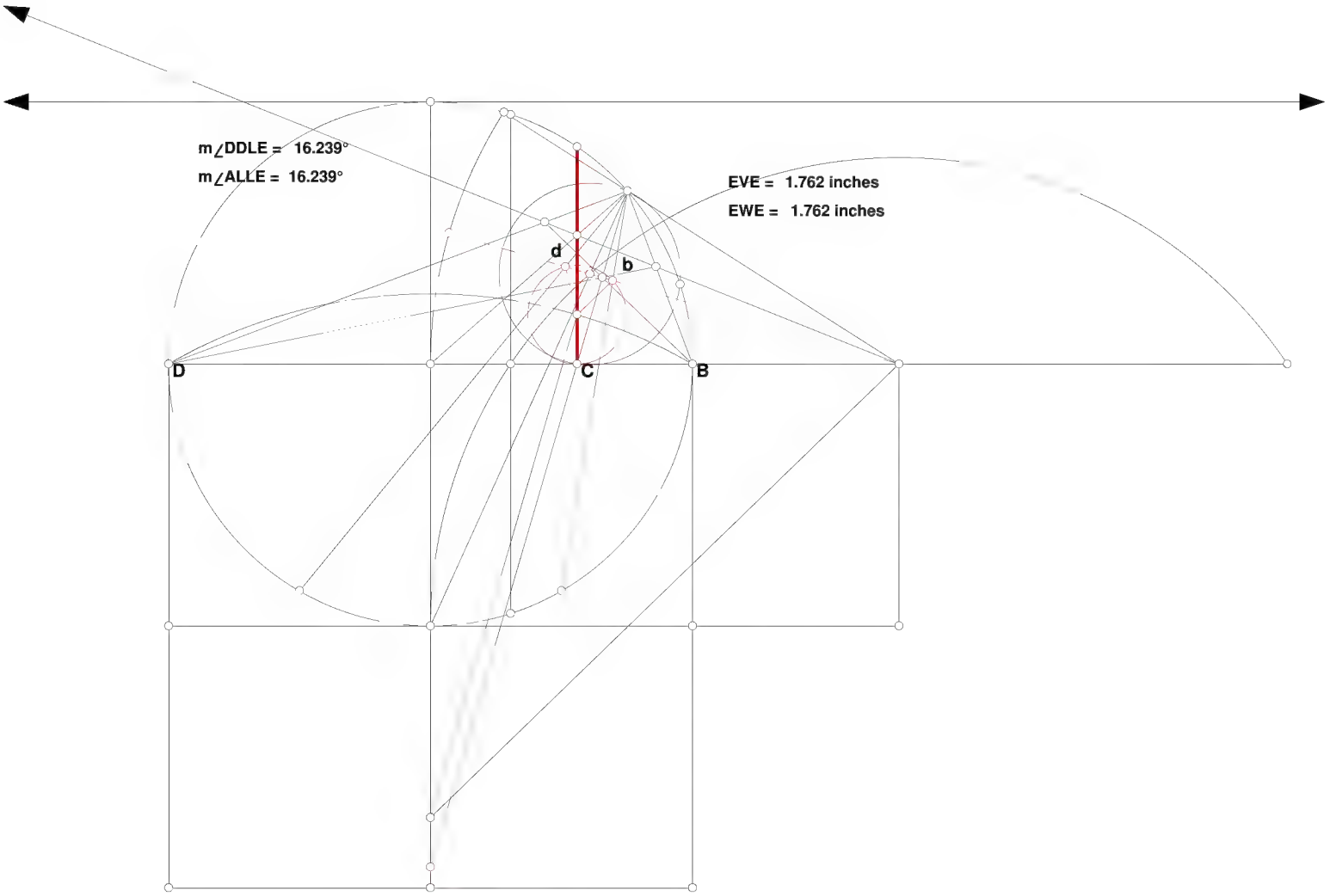

Move J->CY
CX
m∠JAC / 3 = 10.000°
m∠JAC = 30.000°
m∠CXAC = 10.000°
m∠CXAC = 0.000°
(m∠JAC / 3 - m∠CXAC)·1000 = 0.006°
m∠DCAC = 40.000°
m∠DTADN = 40.000°
(10 - m∠CXAC)·1000000 = 5.498

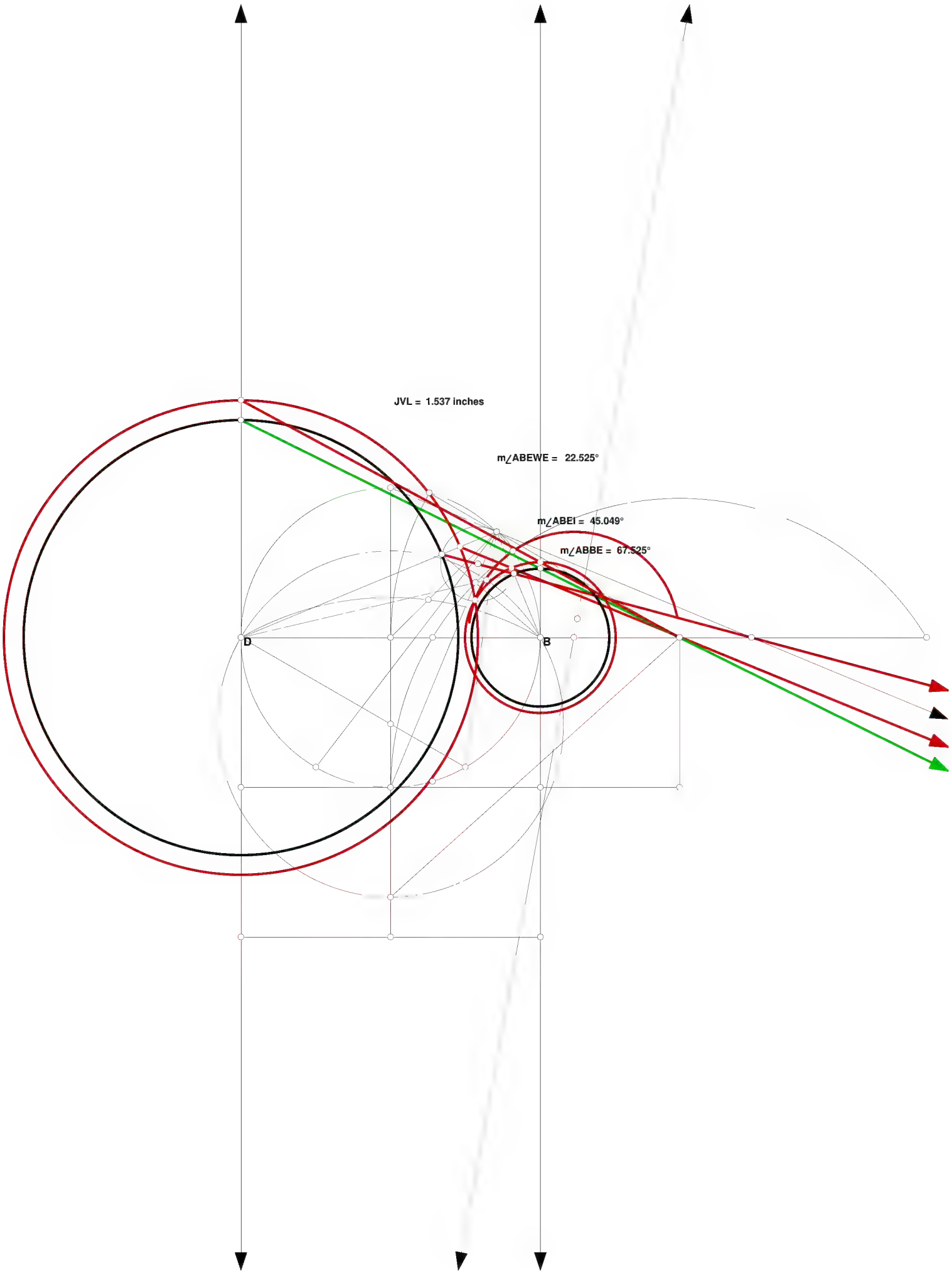

BP
BL
CA
m∠JAC = 46.817°
m∠BPAC = 15.603°
m∠JAC / m∠BPAC = 3.001
m∠JAC / 3 - m∠BPAC = 0.003°
BZBL = 1.859 inches
CABL = 1.859 inches

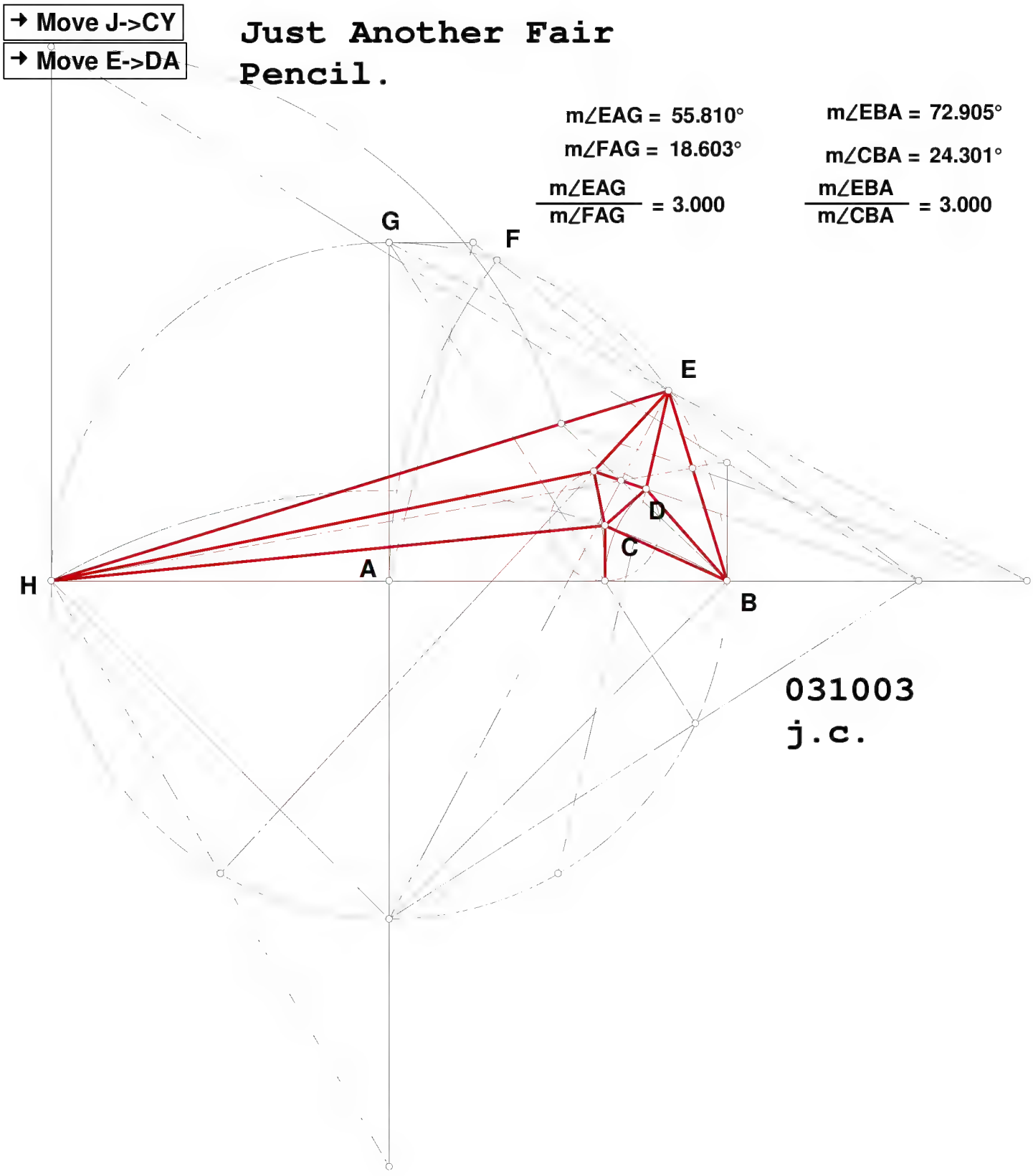

m∠ALLE = 16.654°
d
b
D
C
B

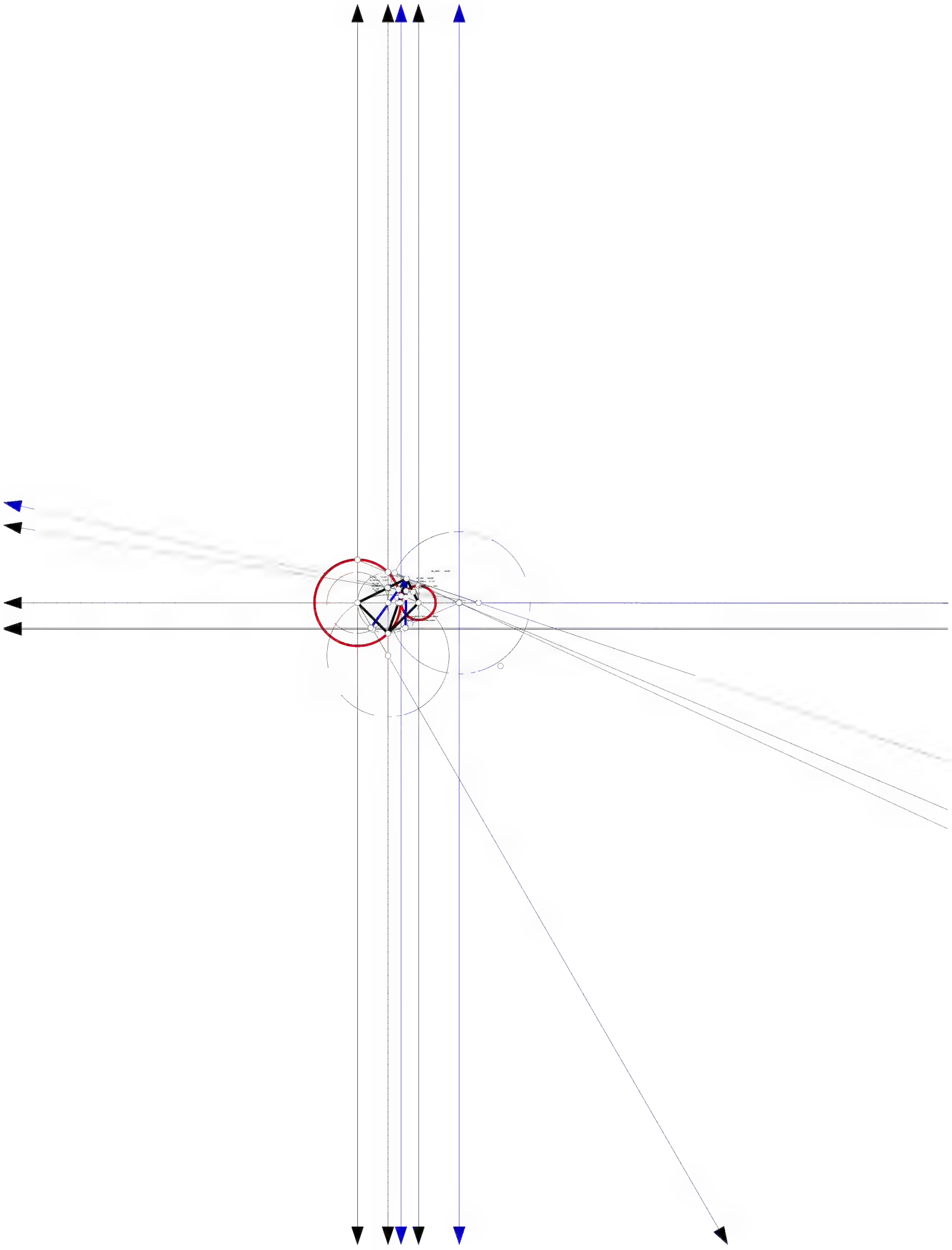

D
B

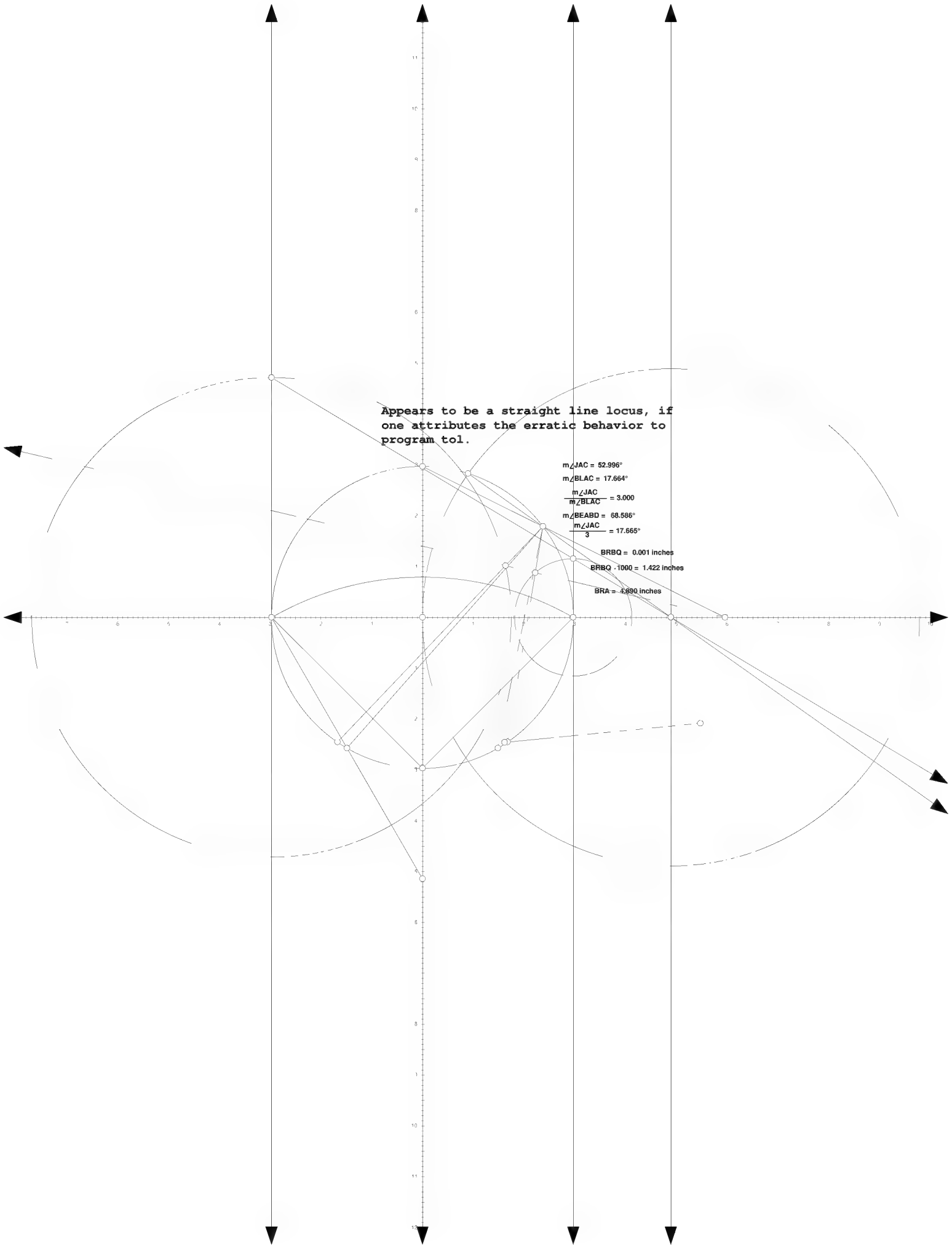

D
B

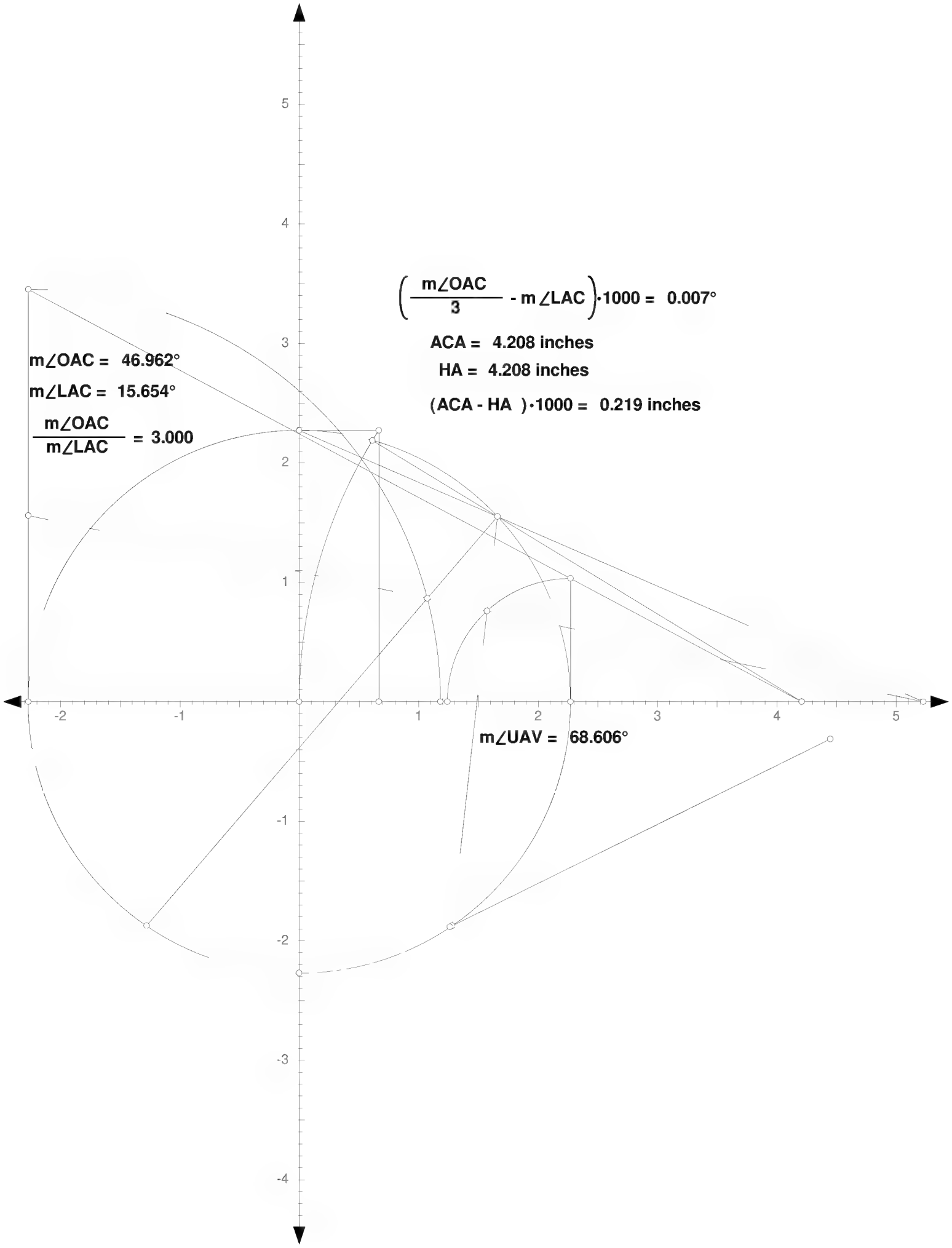

m∠DDLE = 16.239°
m∠ALLE = 16.239°
EVE = 1.762 inches
EWE = 1.762 inches
d
b
D
C
B

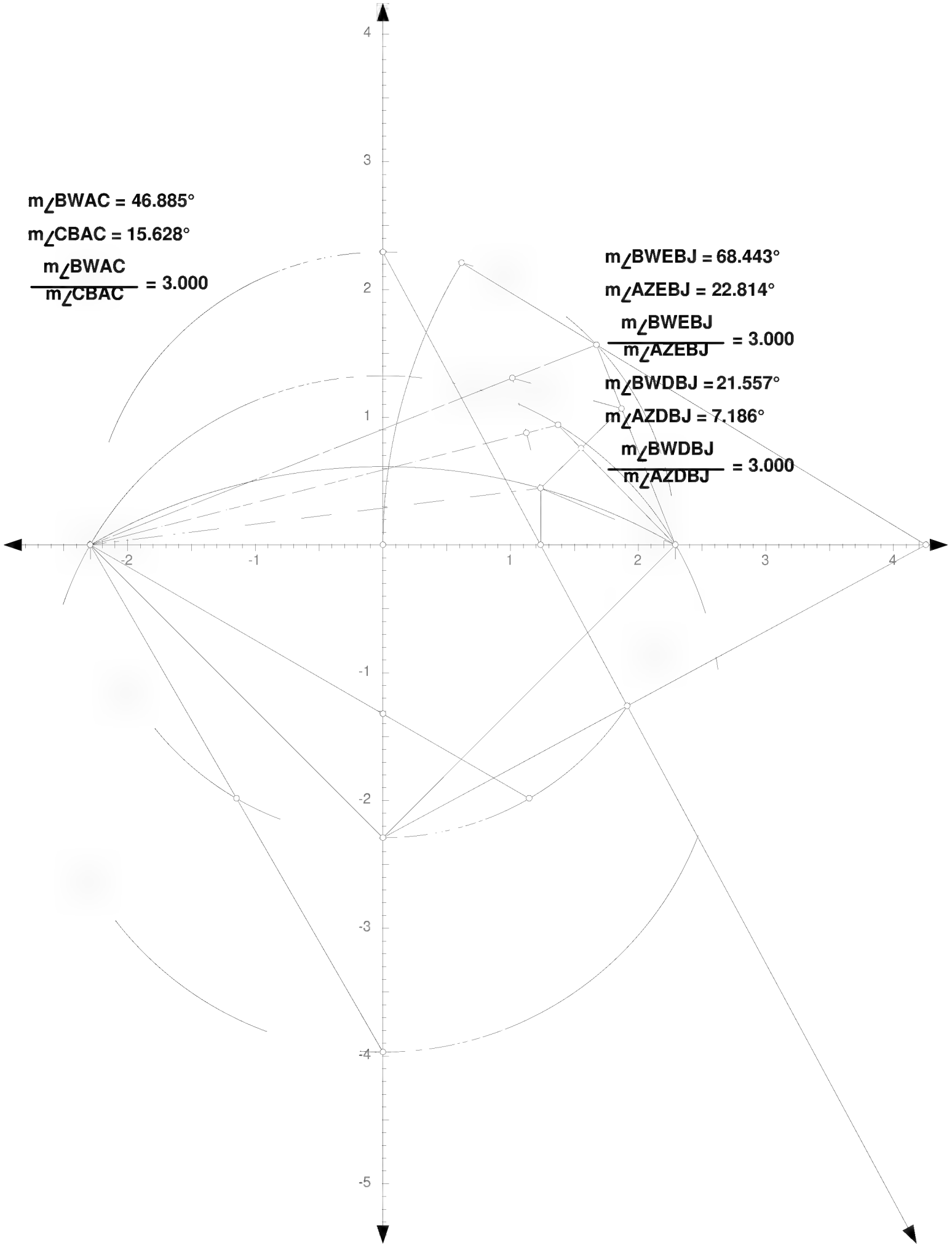

JVL = 1.537 inches
m∠ABEWE = 22.525°
m∠ABEI = 45.049°
m∠ABBE = 67.525°
D
B

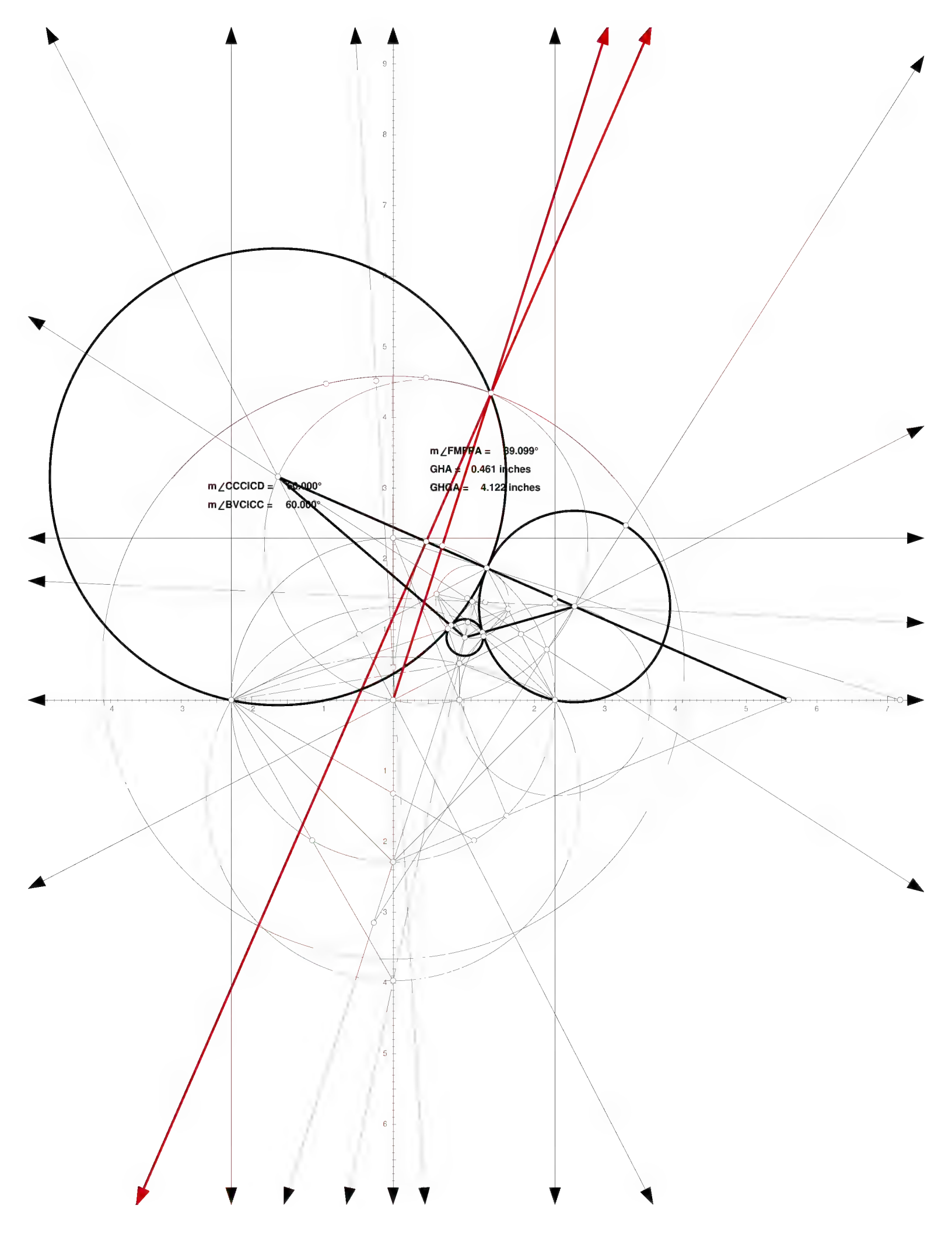

→ Move J->CY
→ Move E->DA
Just Another Fair Pencil.
m∠EAG = 55.810°
m∠FAG = 18.603°
m∠EAG / m∠FAG = 3.000
m∠EBA = 72.905°
m∠CBA = 24.301°
m∠EBA / m∠CBA = 3.000
G
F
E
D
C
A
H
B
031003
j.c.

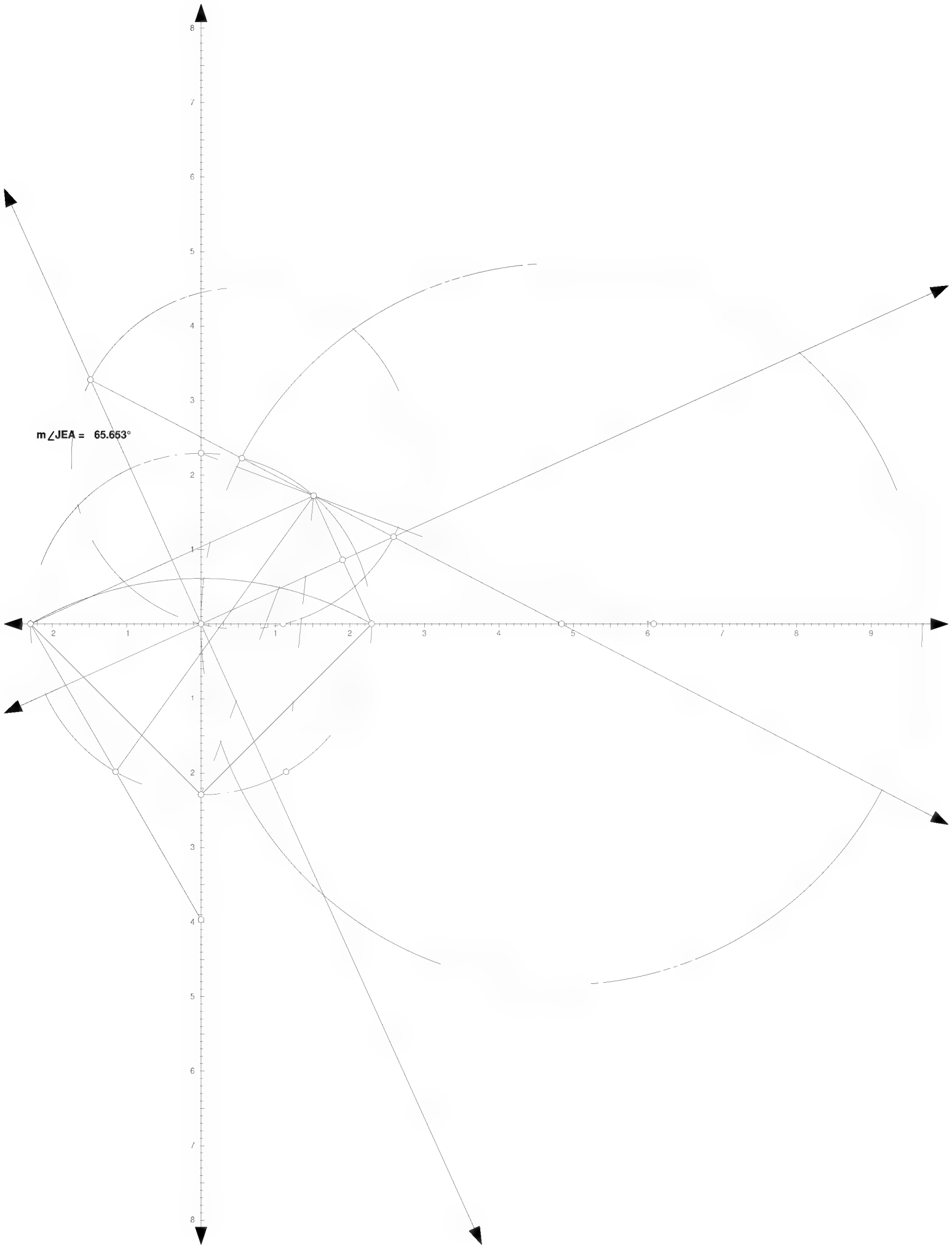


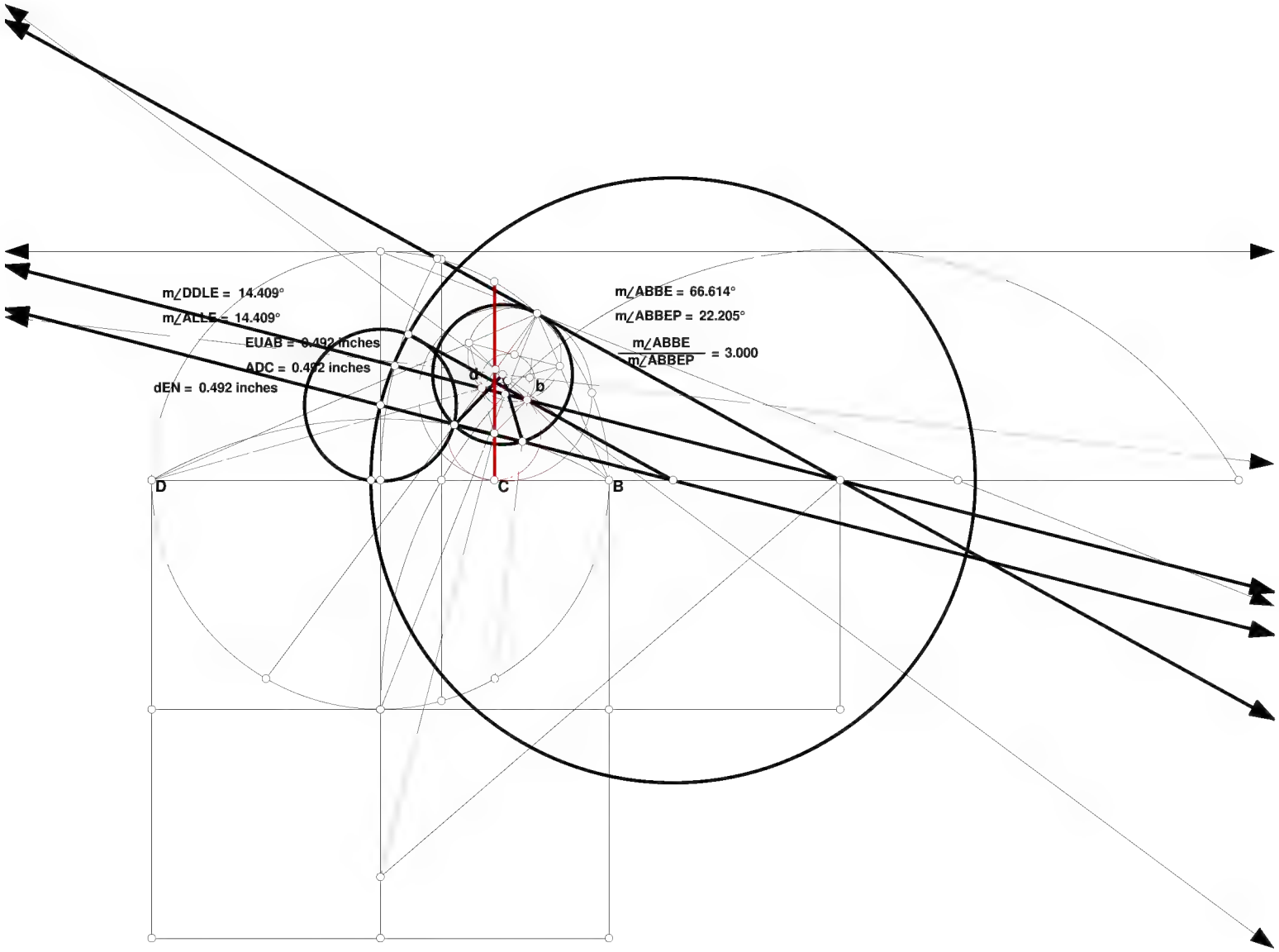

Appears to be a straight line locus, if one attributes the erratic behavior to program tol.
m∠JAC = 52.996°
m∠BLAC = 17.664°
m∠JAC / m∠BLAC = 3.000
m∠BEABD = 68.586°
m∠JAC / 3 = 17.665°
BRBQ = 0.001 inches
BRBQ · 1000 = 1.422 inches
BRA = 4.690 inches

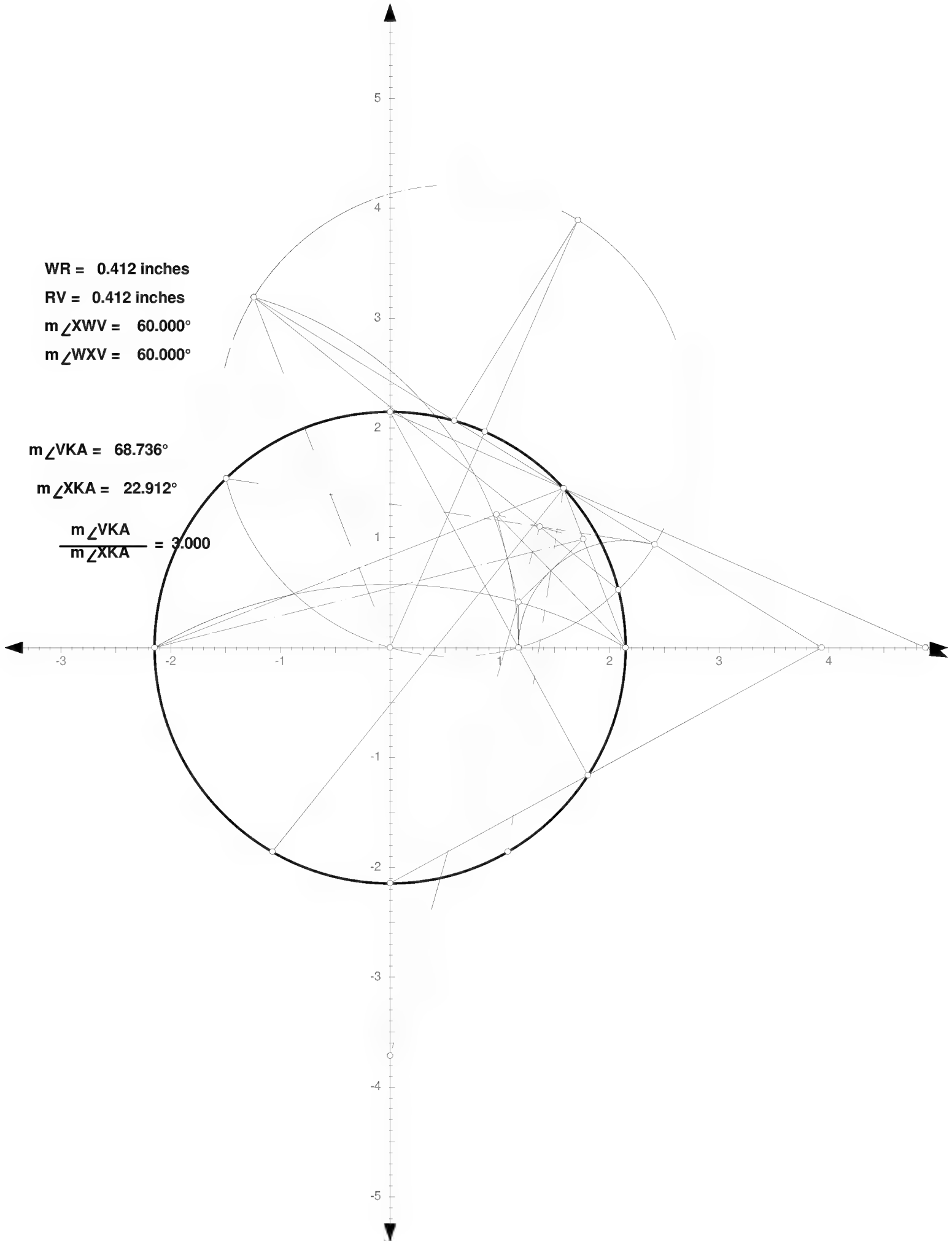

$\left(\frac{m\angle OAC}{3} - m\angle LAC\right)\cdot 1000 = 0.007°$
ACA = 4.208 inches
HA = 4.208 inches
(ACA - HA)·1000 = 0.219 inches
m∠OAC = 46.962°
m∠LAC = 15.654°
$\frac{m\angle OAC}{m\angle LAC} = 3.000$
m∠UAV = 68.606°

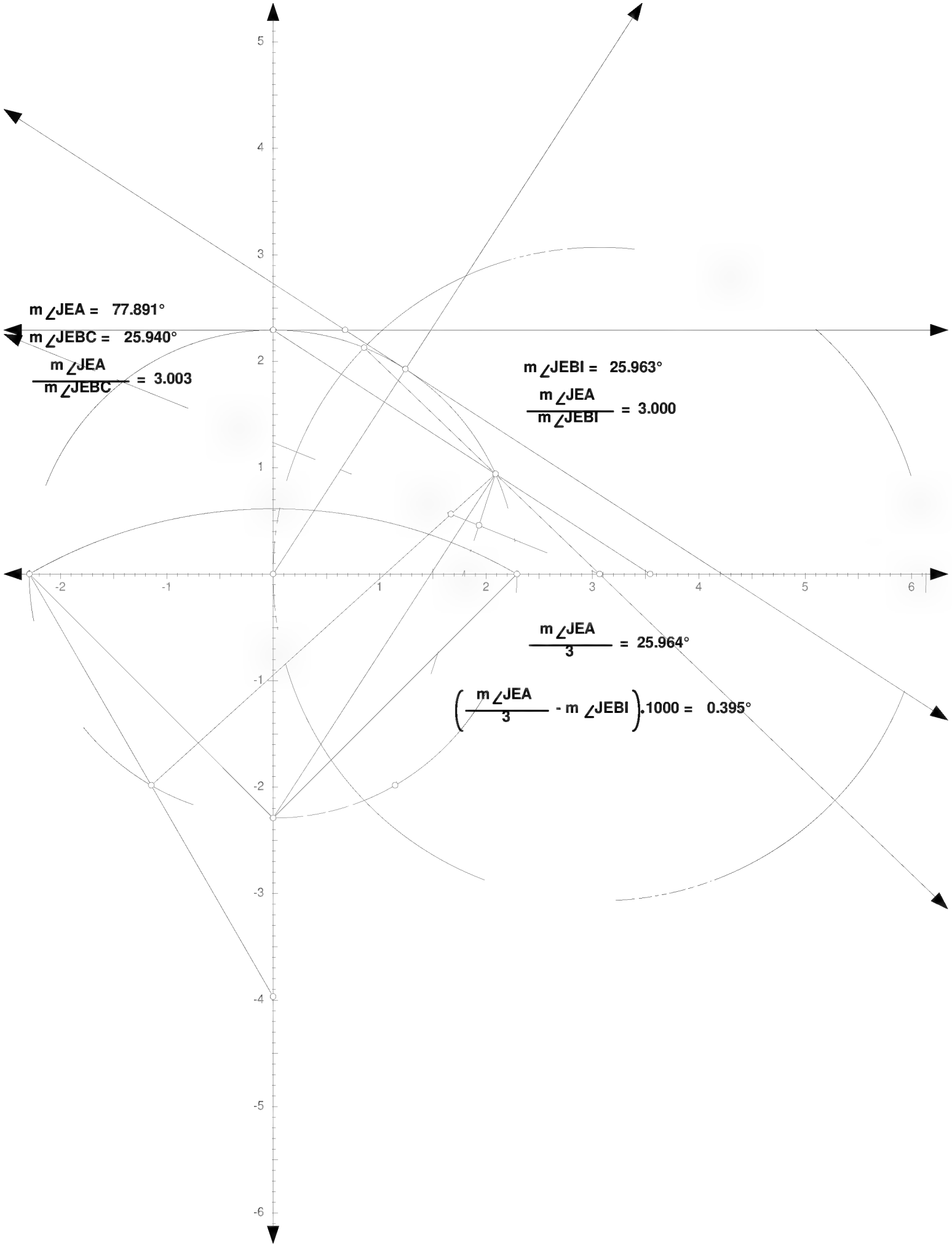

m∠BWAC = 46.885°
m∠CBAC = 15.628°
m∠BWAC / m∠CBAC = 3.000
m∠BWEBJ = 68.443°
m∠AZEBJ = 22.814°
m∠BWEBJ / m∠AZEBJ = 3.000
m∠BWDBJ = 21.557°
m∠AZDBJ = 7.186°
m∠BWDBJ / m∠AZDBJ = 3.000
4
3
2
1
-1
-2
-3
-4
-5
-2
-1
1
2
3
4

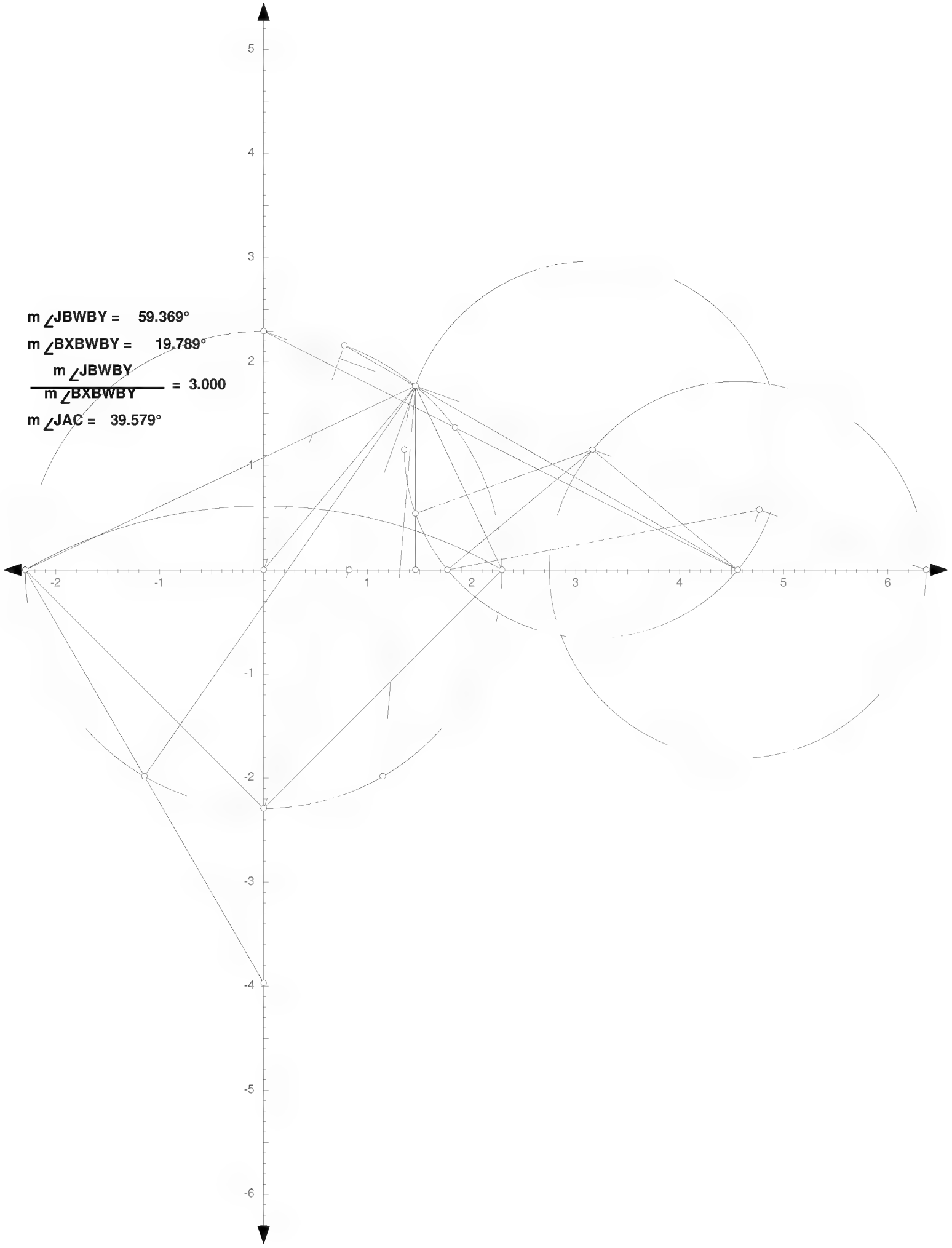

m∠FMPBA = 39.099°
GHA = 0.461 inches
GHGA = 4.122 inches
m∠CCCICD = 60.000°
m∠BVCICC = 60.000°

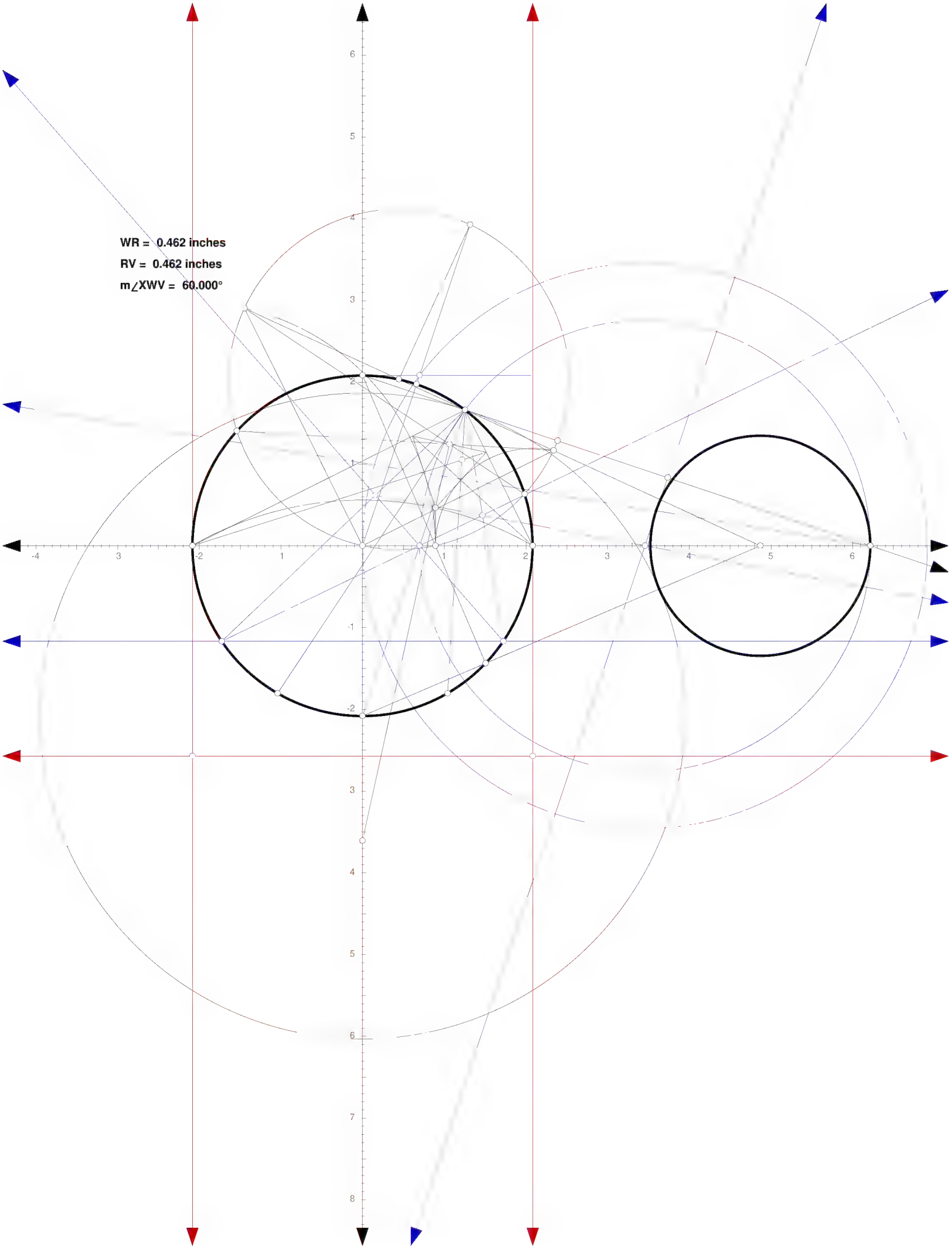

m∠JEA = 65.653°

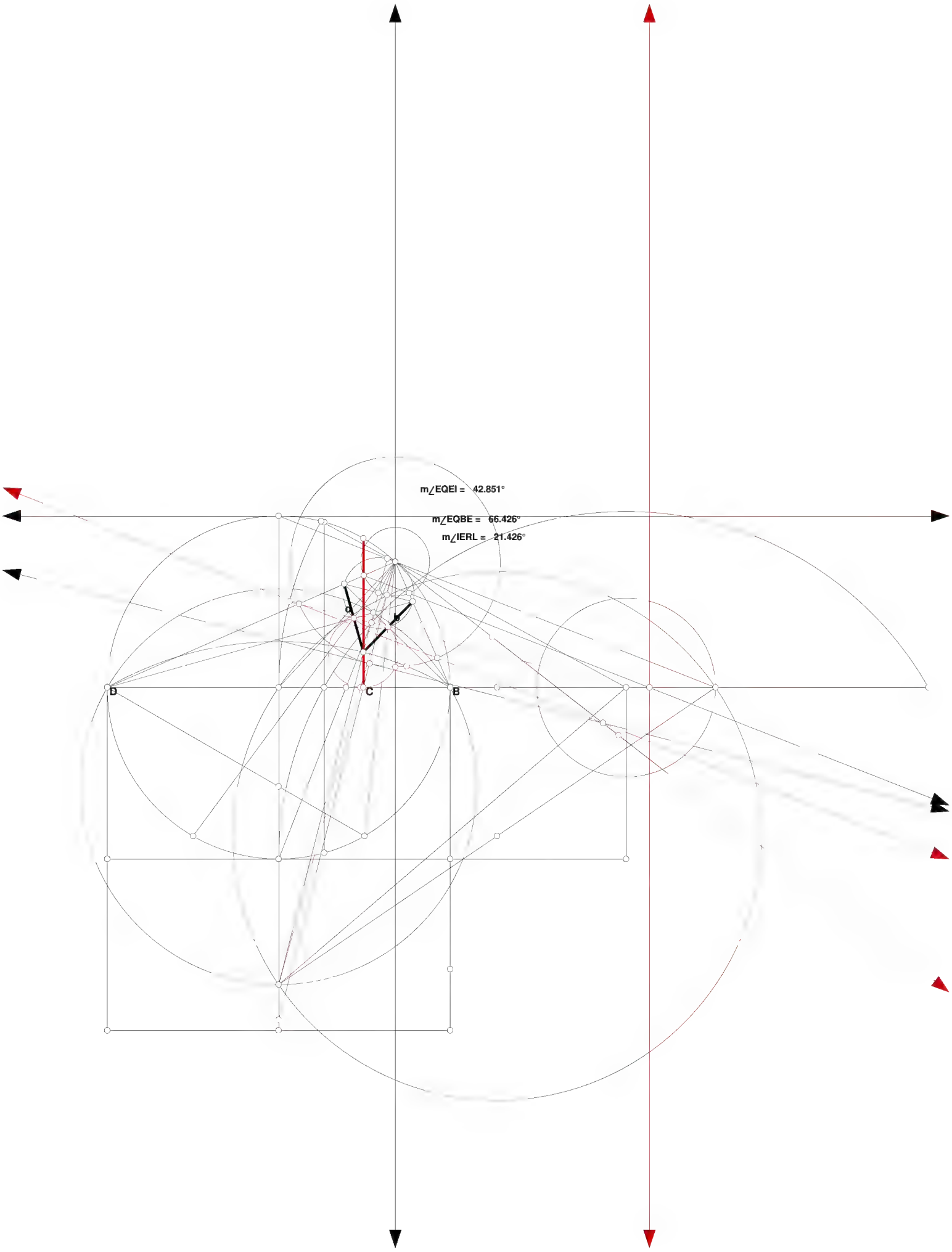

m∠DDLE = 14.409°
m∠ALLE = 14.409°
EUAB = 0.492 inches
ADC = 0.492 inches
dEN = 0.492 inches
m∠ABBE = 66.614°
m∠ABBEP = 22.205°
m∠ABBE / m∠ABBEP = 3.000
d
a
b
D
C
B

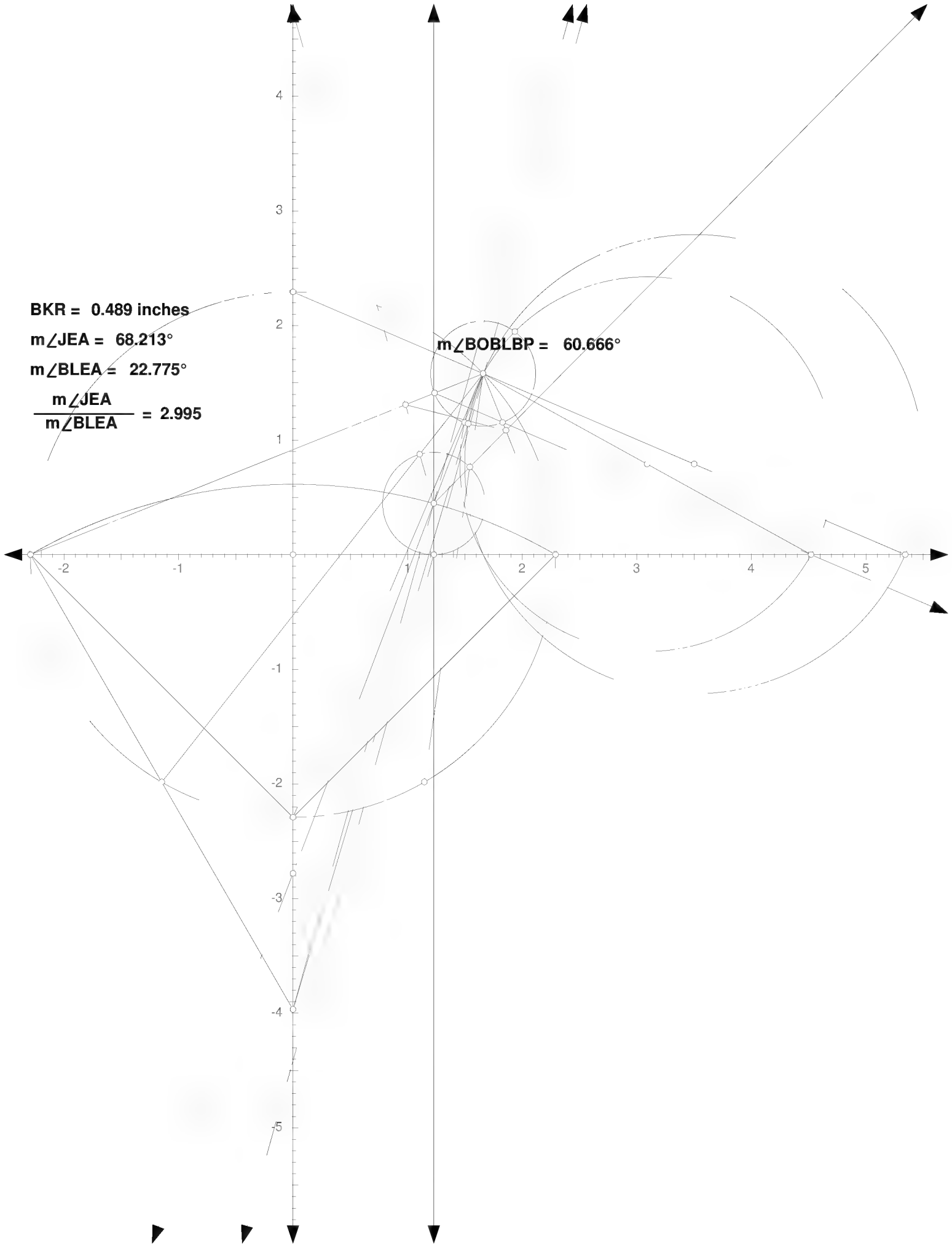

WR = 0.412 inches
RV = 0.412 inches
m∠XWV = 60.000°
m∠WXV = 60.000°
m∠VKA = 68.736°
m∠XKA = 22.912°
m∠VKA / m∠XKA = 3.000
5
4
3
2
1
-1
-2
-3
-4
-5
-3
-2
-1
1
2
3
4

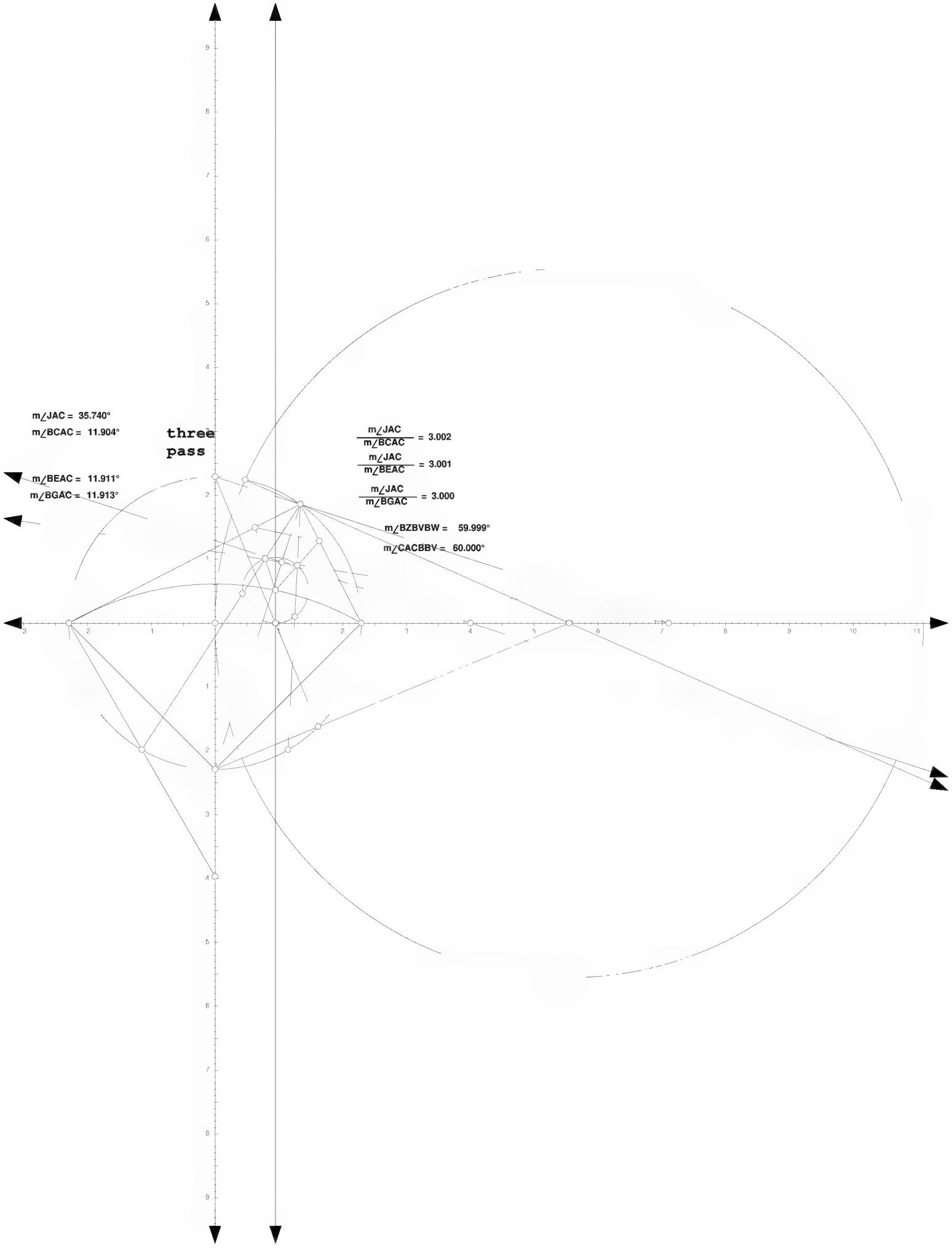

m∠JEA = 77.891°
m∠JEBC = 25.940°
m∠JEA / m∠JEBC = 3.003
m∠JEBI = 25.963°
m∠JEA / m∠JEBI = 3.000
m∠JEA / 3 = 25.964°
(m∠JEA / 3 - m∠JEBI).1000 = 0.395°

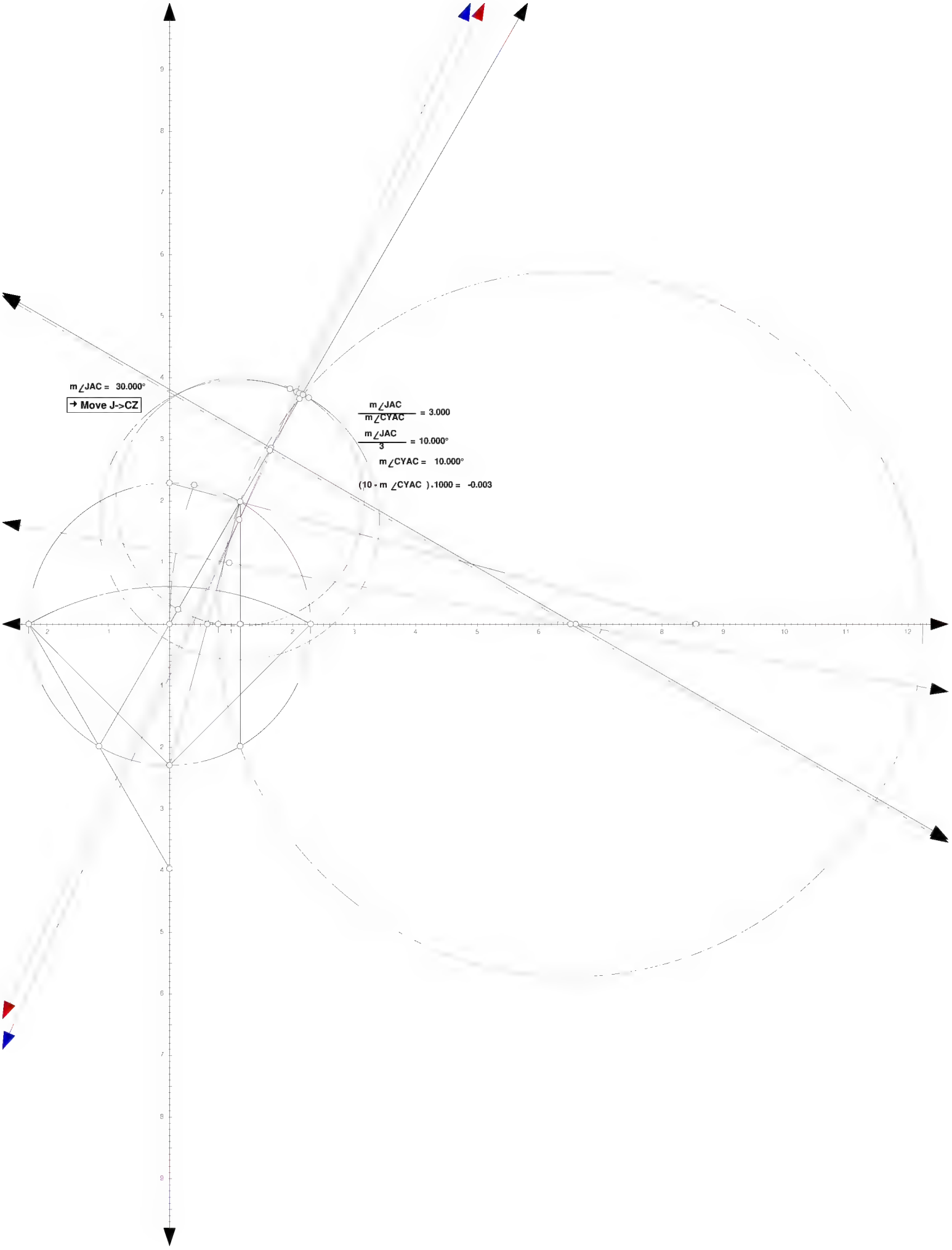

m ∠JBWBY = 59.369°
m ∠BXBWBY = 19.789°
m ∠JBWBY / m ∠BXBWBY = 3.000
m ∠JAC = 39.579°
5
4
3
2
1
-1
-2
-3
-4
-5
-6
-2
-1
1
2
3
4
5
6

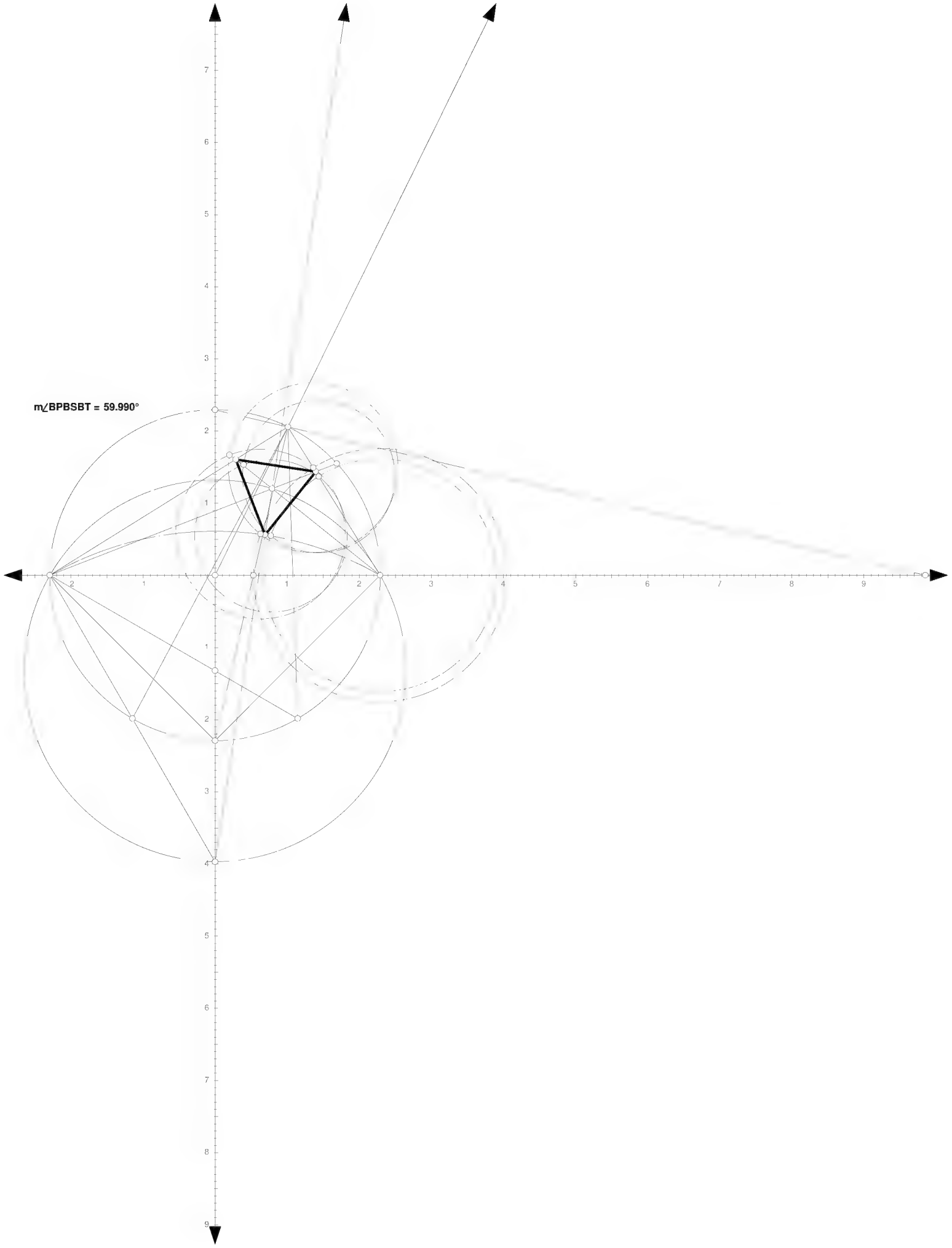

WR = 0.462 inches
RV = 0.462 inches
m∠XWV = 60.000°

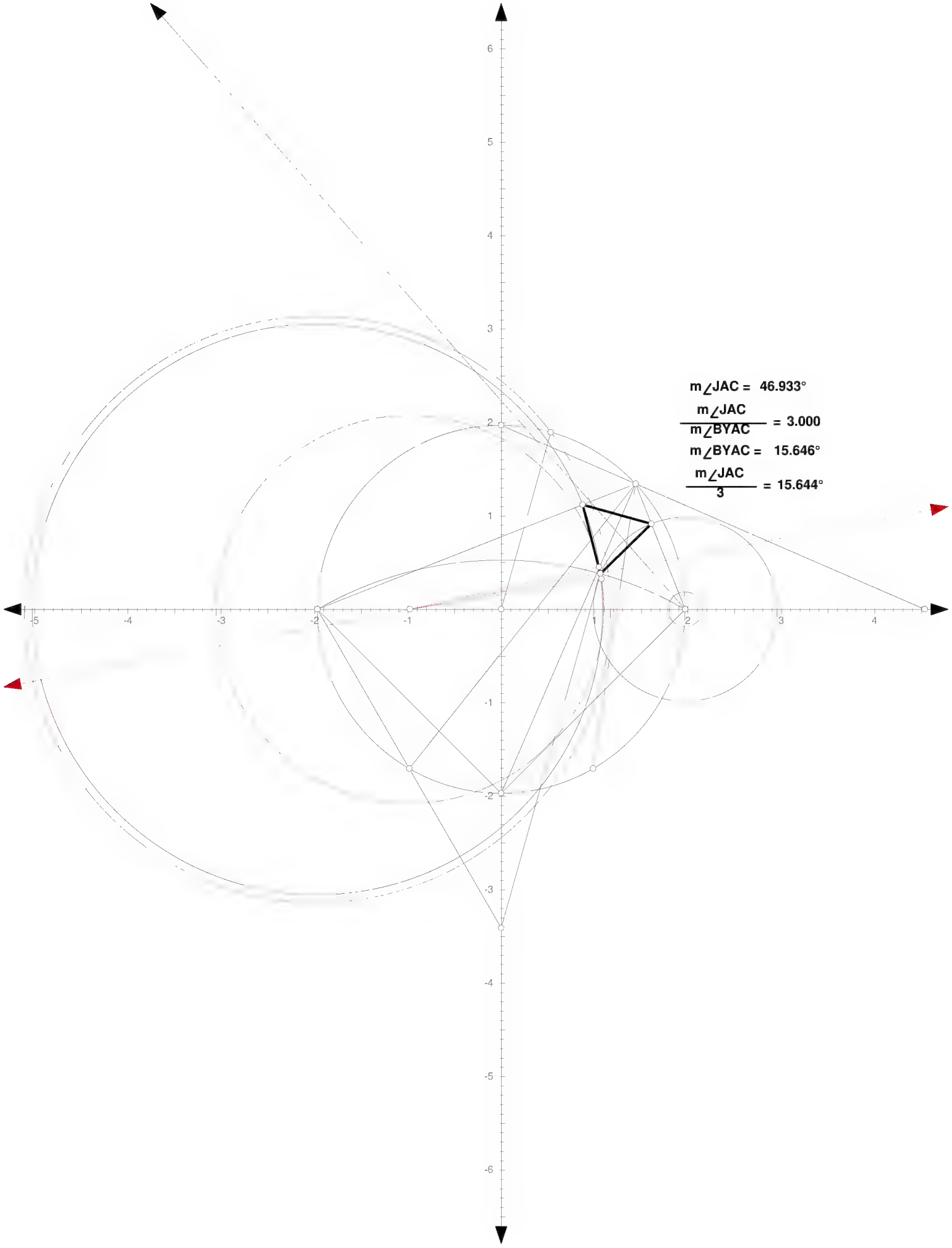

m∠EQEI = 42.851°
m∠EQBE = 66.426°
m∠IERL = 21.426°
D
C
B

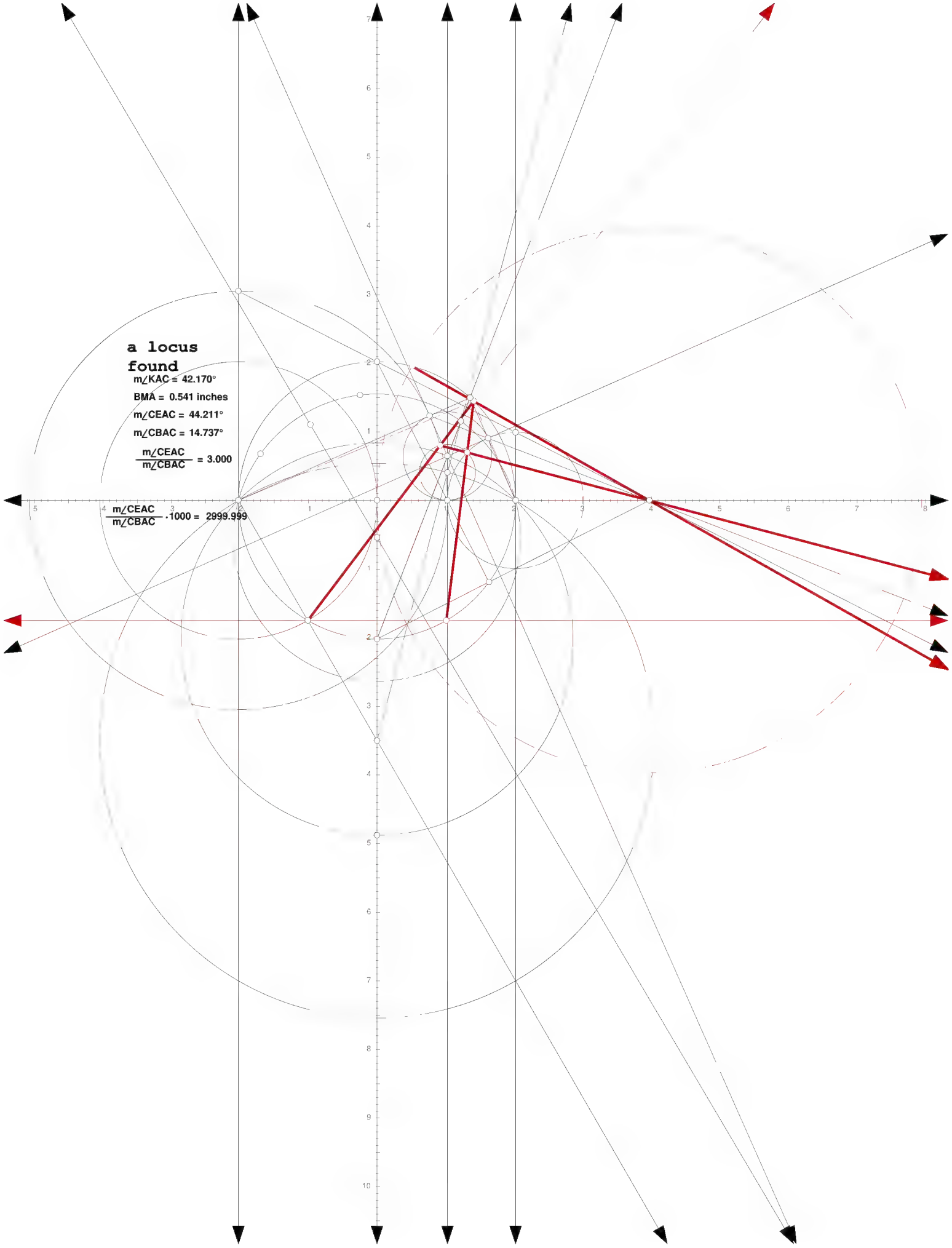

BKR = 0.489 inches
m∠JEA = 68.213°
m∠BLEA = 22.775°
m∠JEA / m∠BLEA = 2.995
m∠BOBLBP = 60.666°
-2
-1
1
2
3
4
5
4
3
2
1
-1
-2
-3
-4
-5

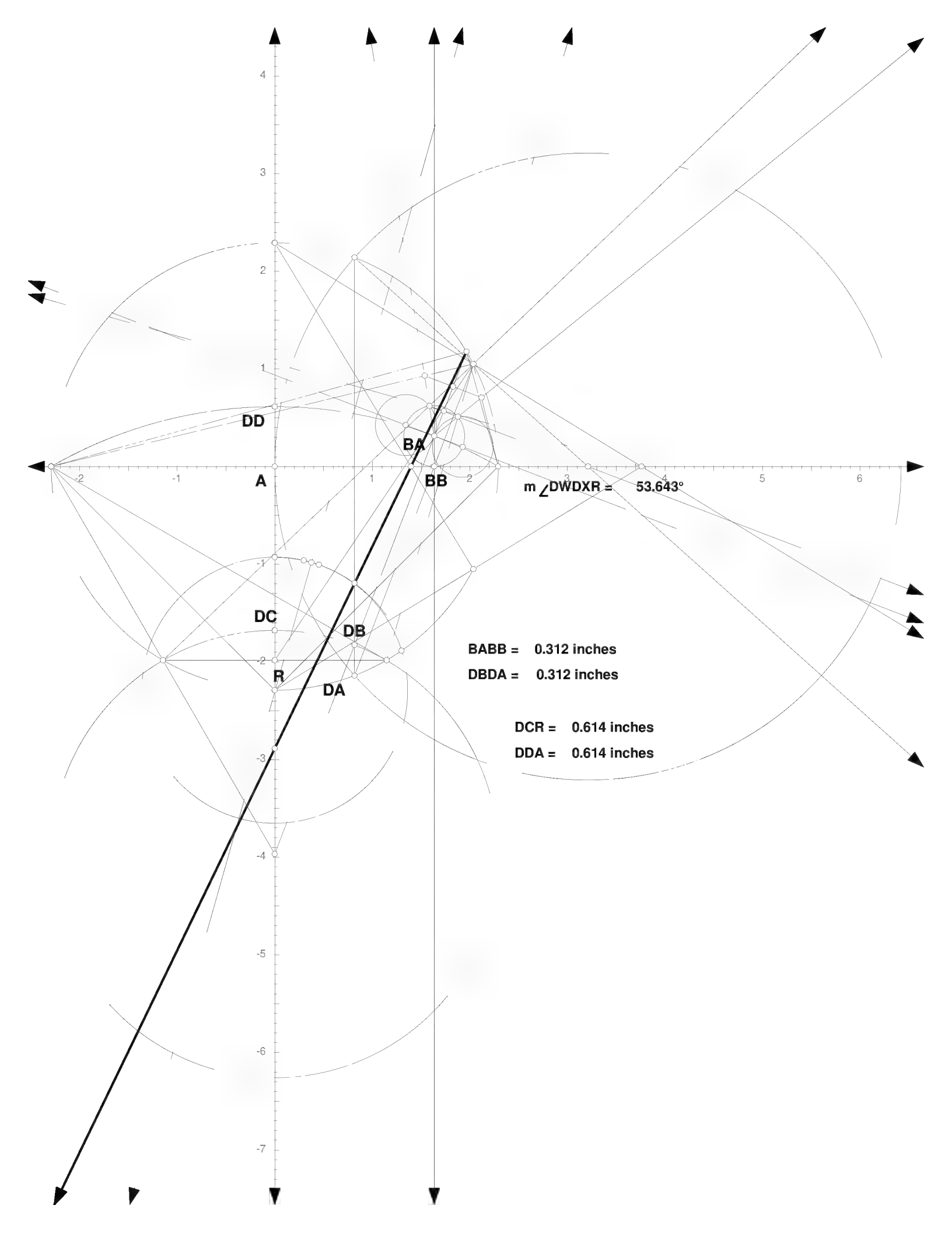

m∠JAC = 35.740°
m∠BCAC = 11.904°
m∠BEAC = 11.911°
m∠BGAC = 11.913°
three
pass
m∠JAC / m∠BCAC = 3.002
m∠JAC / m∠BEAC = 3.001
m∠JAC / m∠BGAC = 3.000
m∠BZBVBW = 59.999°
m∠CACBBV = 60.000°

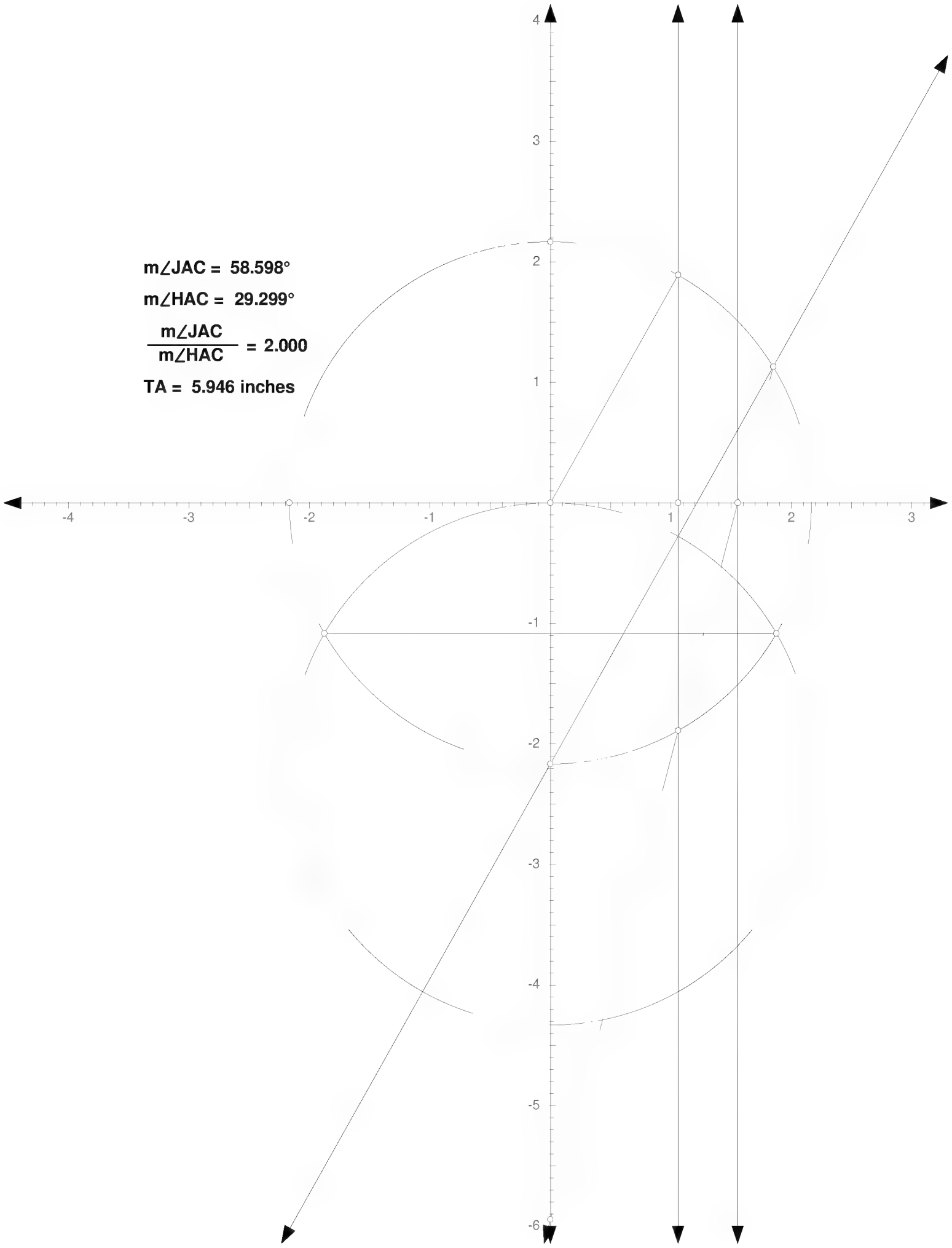

m∠JAC = 30.000°
→ Move J->CZ
m∠JAC / m∠CYAC = 3.000
m∠JAC / 3 = 10.000°
m∠CYAC = 10.000°
(10 - m ∠CYAC) .1000 = -0.003

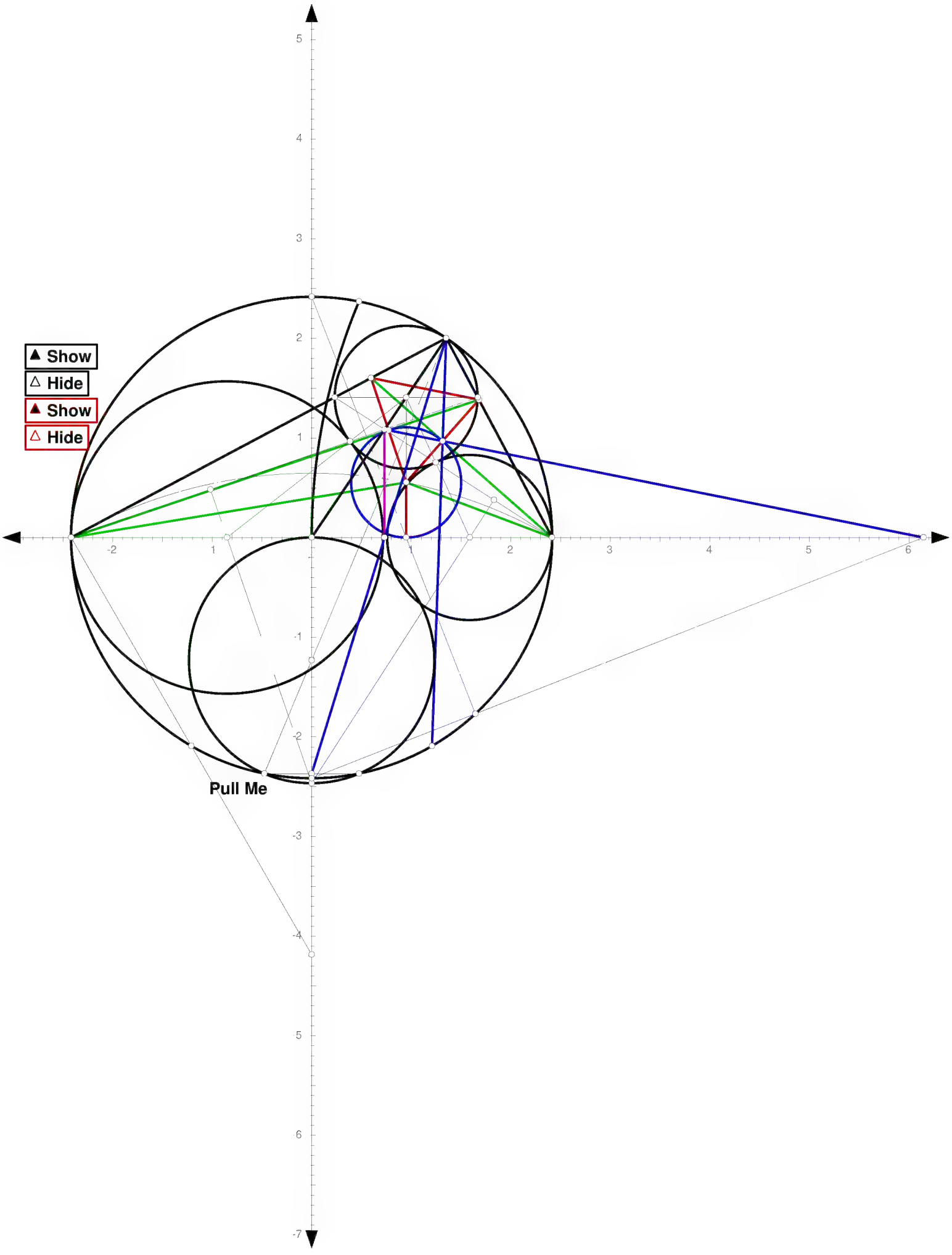

m∠BPBSBT = 59.990°

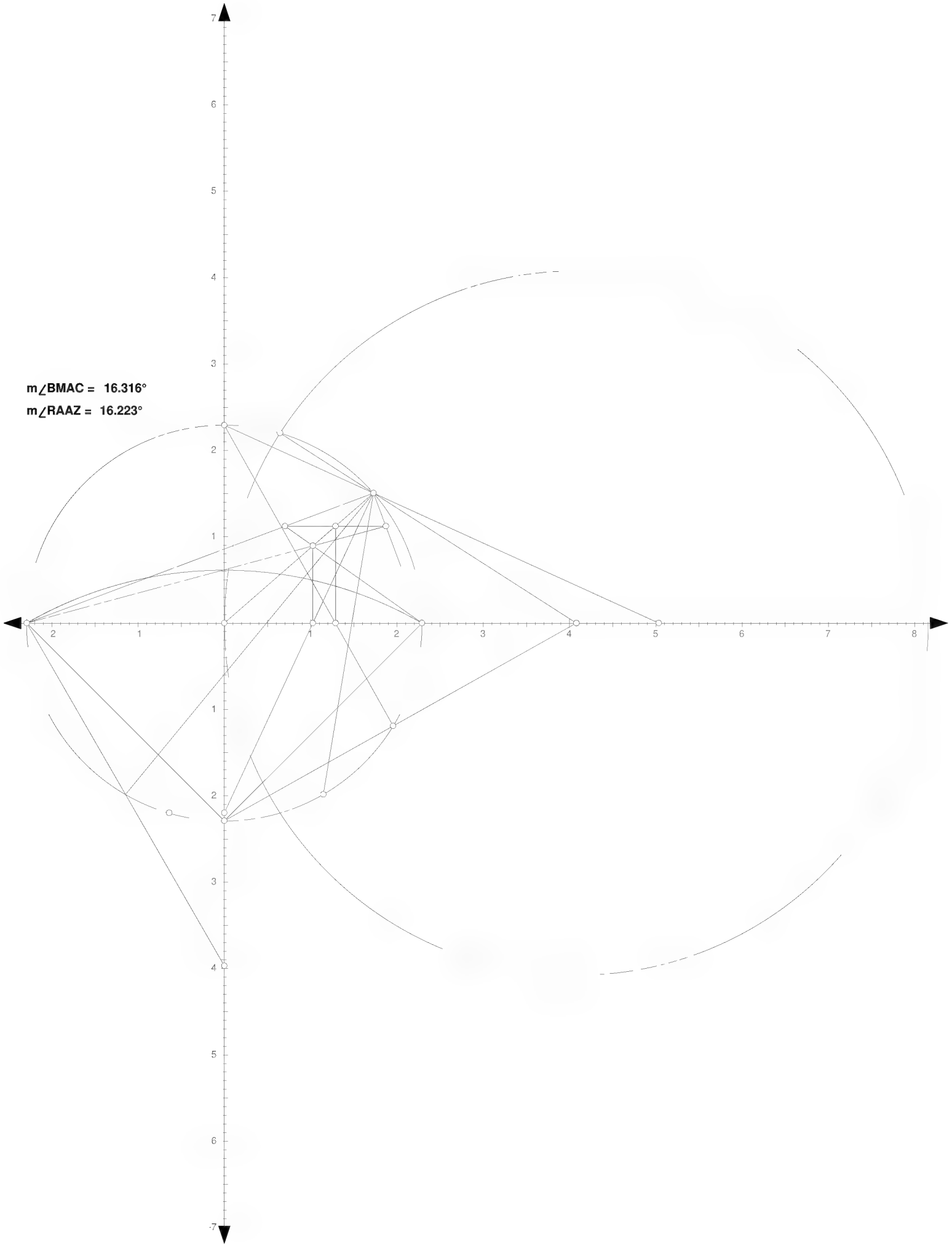

m∠JAC = 46.933°
m∠JAC / m∠BYAC = 3.000
m∠BYAC = 15.646°
m∠JAC / 3 = 15.644°

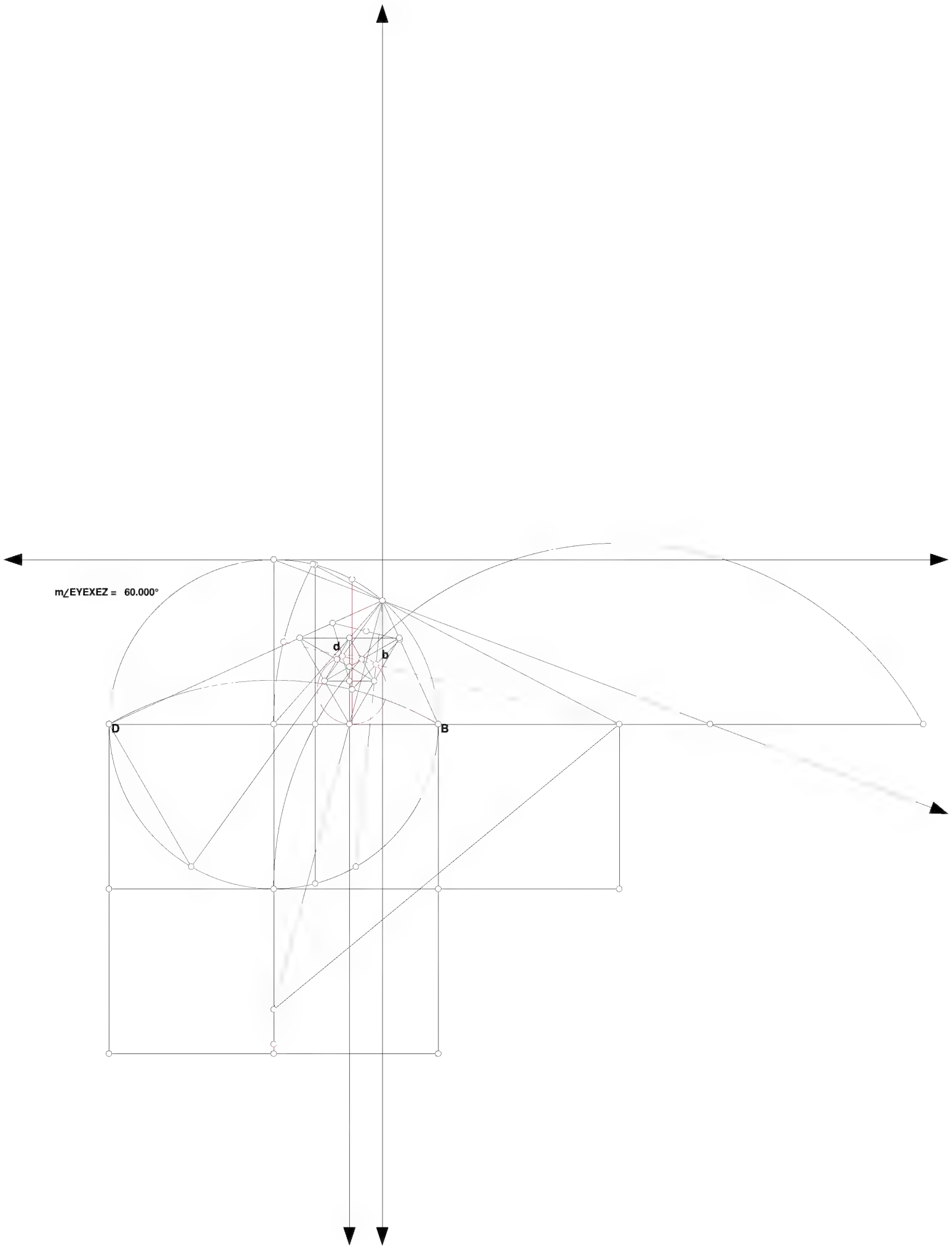

a locus found
m∠KAC = 42.170°
BMA = 0.541 inches
m∠CEAC = 44.211°
m∠CBAC = 14.737°
m∠CEAC / m∠CBAC = 3.000
m∠CEAC / m∠CBAC · 1000 = 2999.999

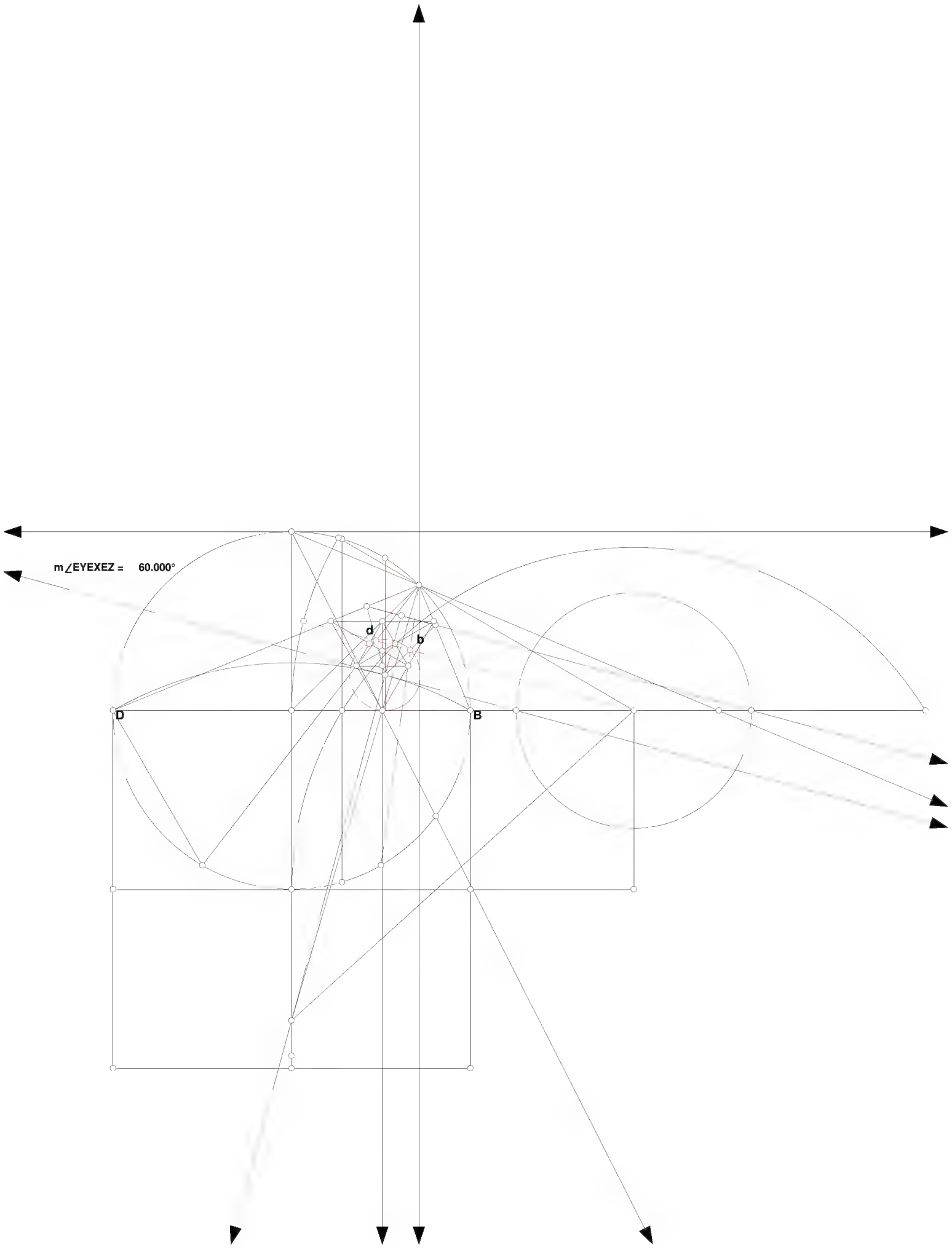

DD
BA
A
BB
m ∠DWDXR = 53.643°
DC
DB
R
DA
BABB = 0.312 inches
DBDA = 0.312 inches
DCR = 0.614 inches
DDA = 0.614 inches

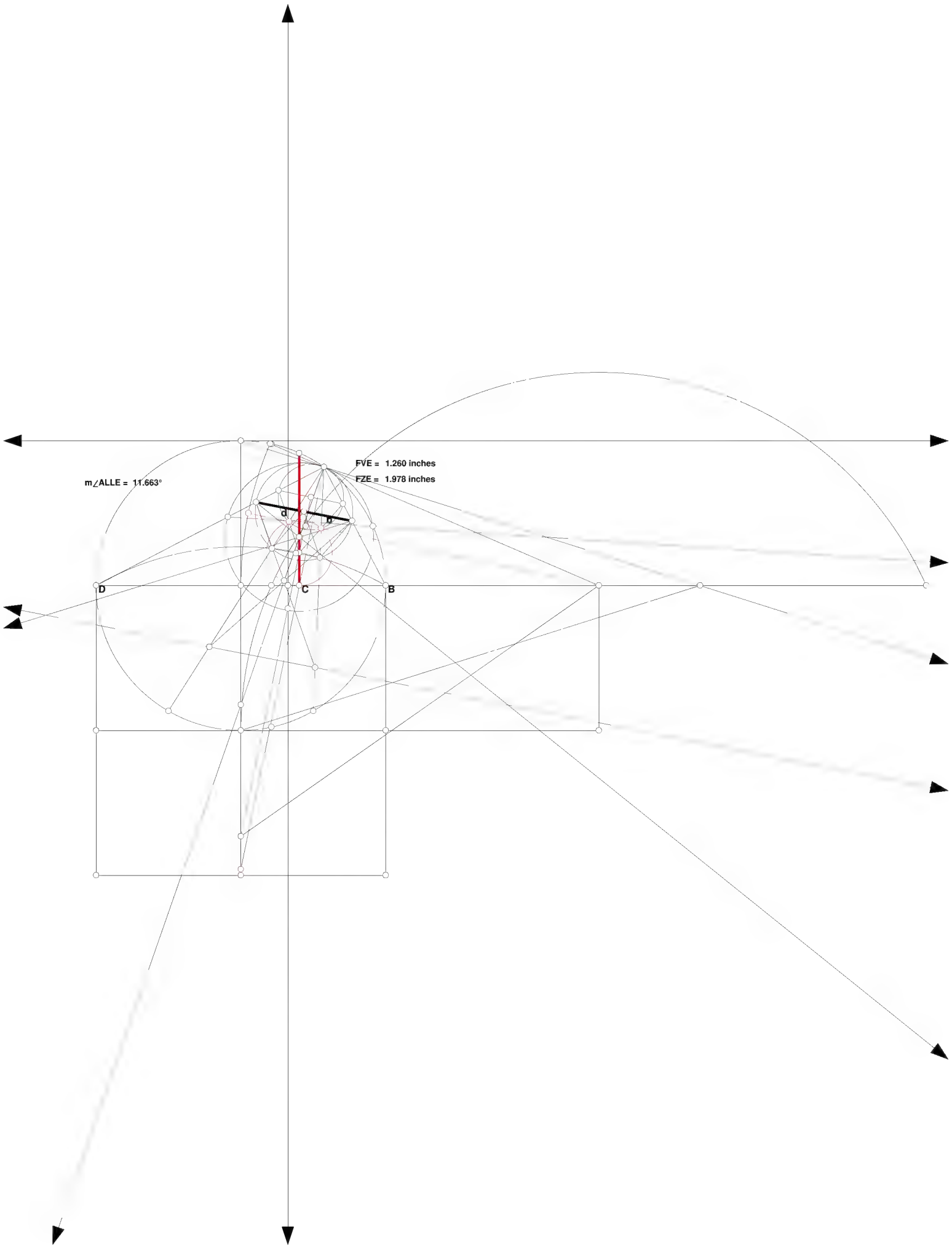

m∠JAC = 58.598°
m∠HAC = 29.299°
m∠JAC / m∠HAC = 2.000
TA = 5.946 inches
4
3
2
1
-1
-2
-3
-4
-5
-6
-4
-3
-2
-1
1
2
3

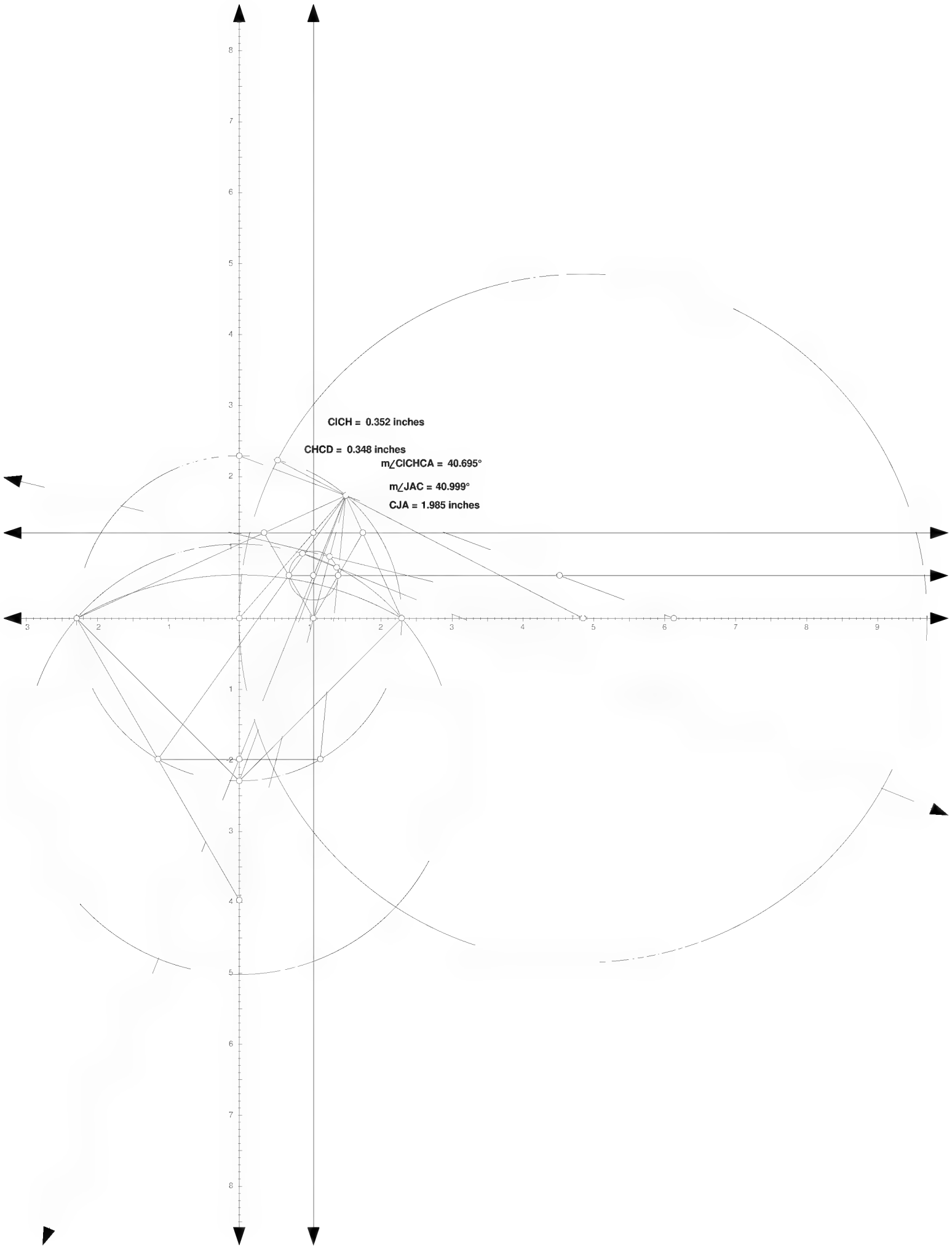

Show
Hide
Show
Hide
Pull Me

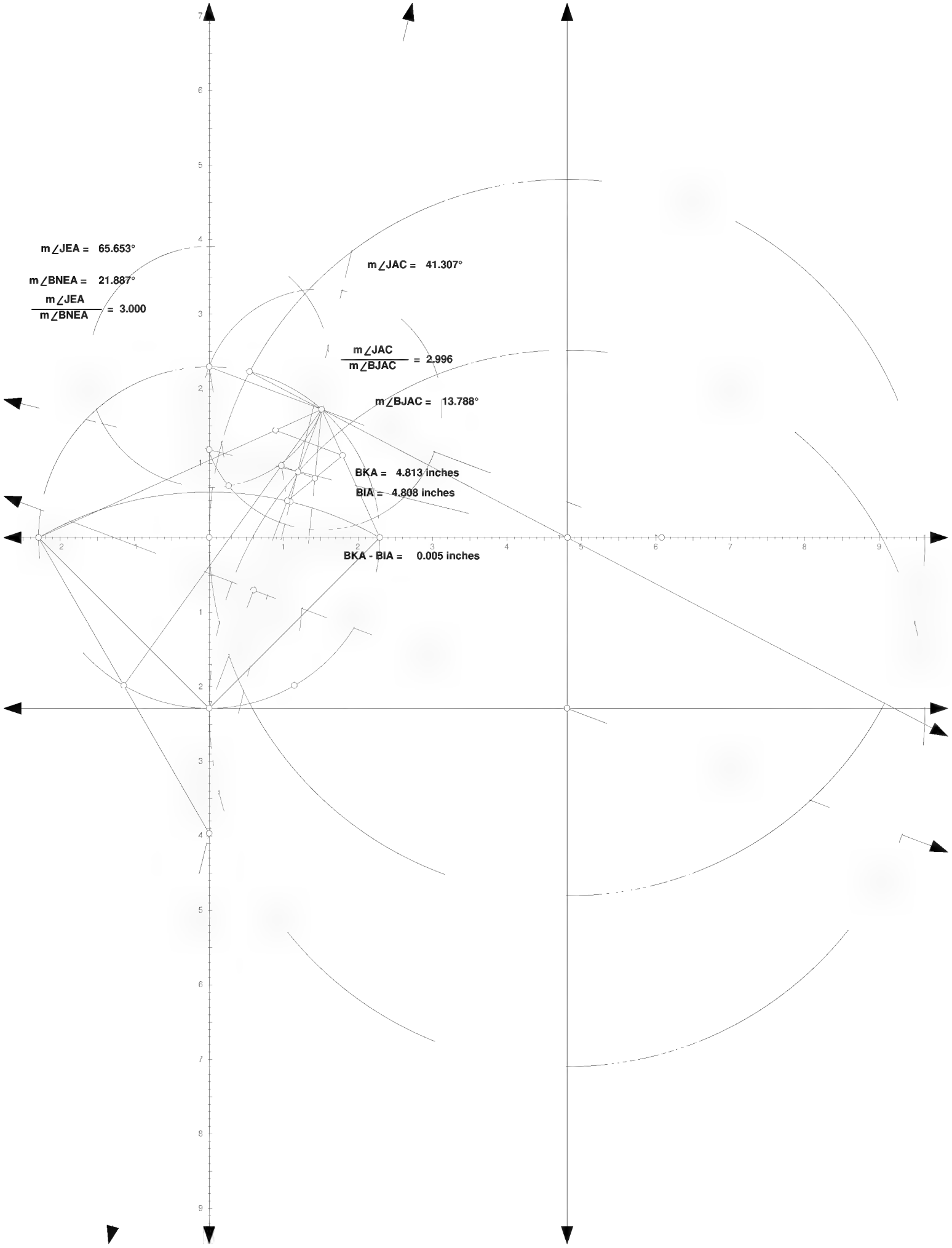

m∠BMAC = 16.316°
m∠RAAZ = 16.223°

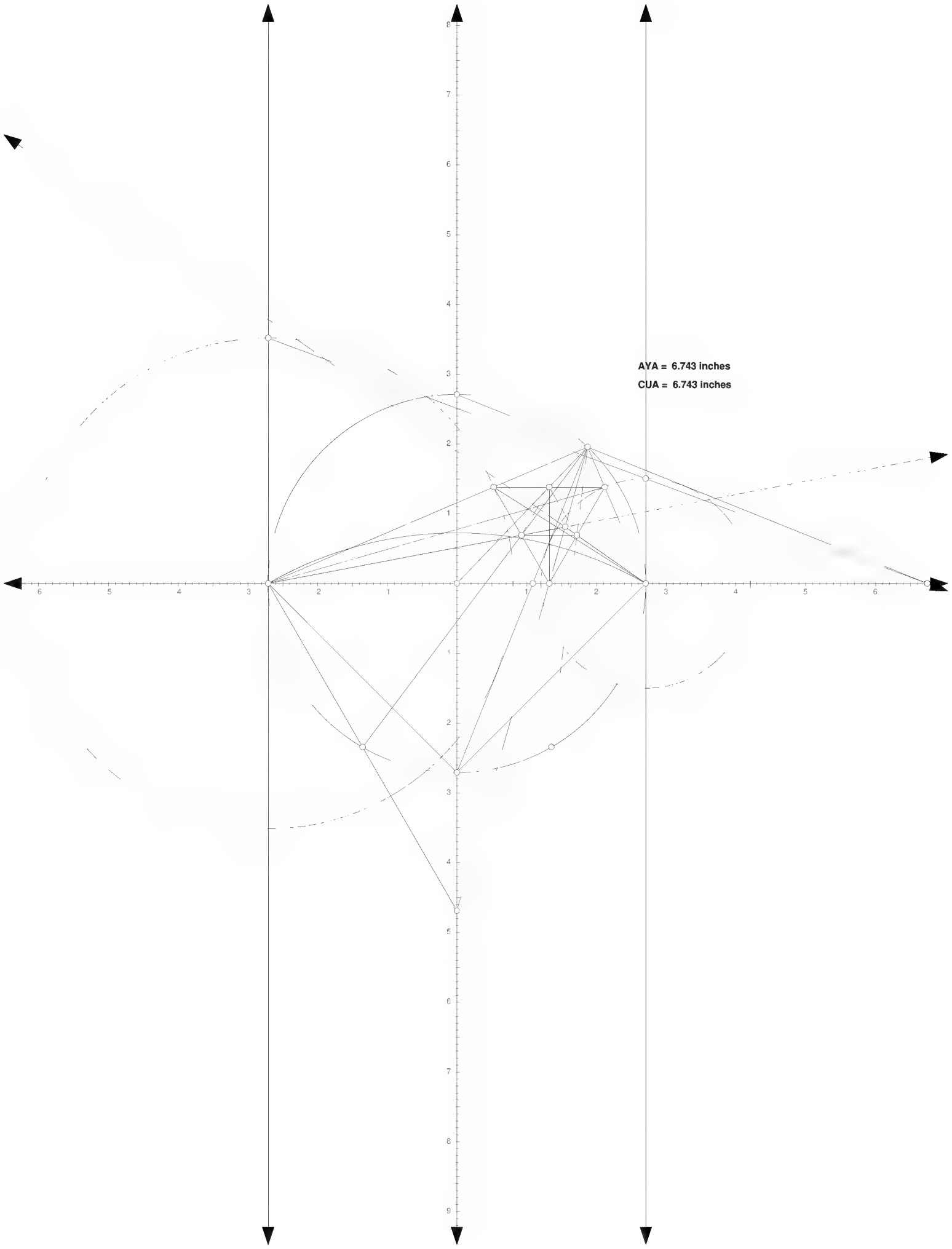

m∠EYEXEZ = 60.000°
d
b
D
B

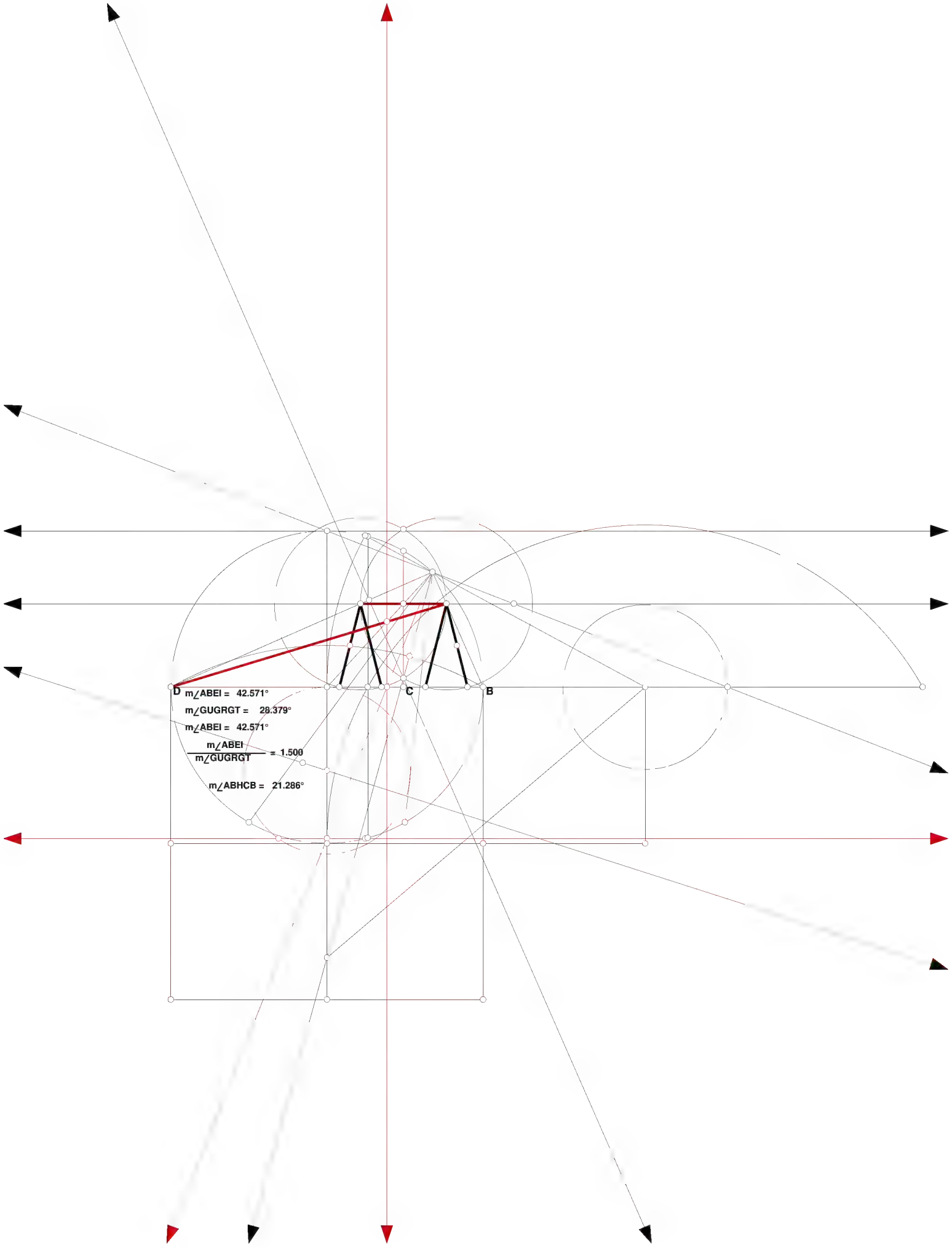

m∠EYEXEZ = 60.000°
d
b
D
B

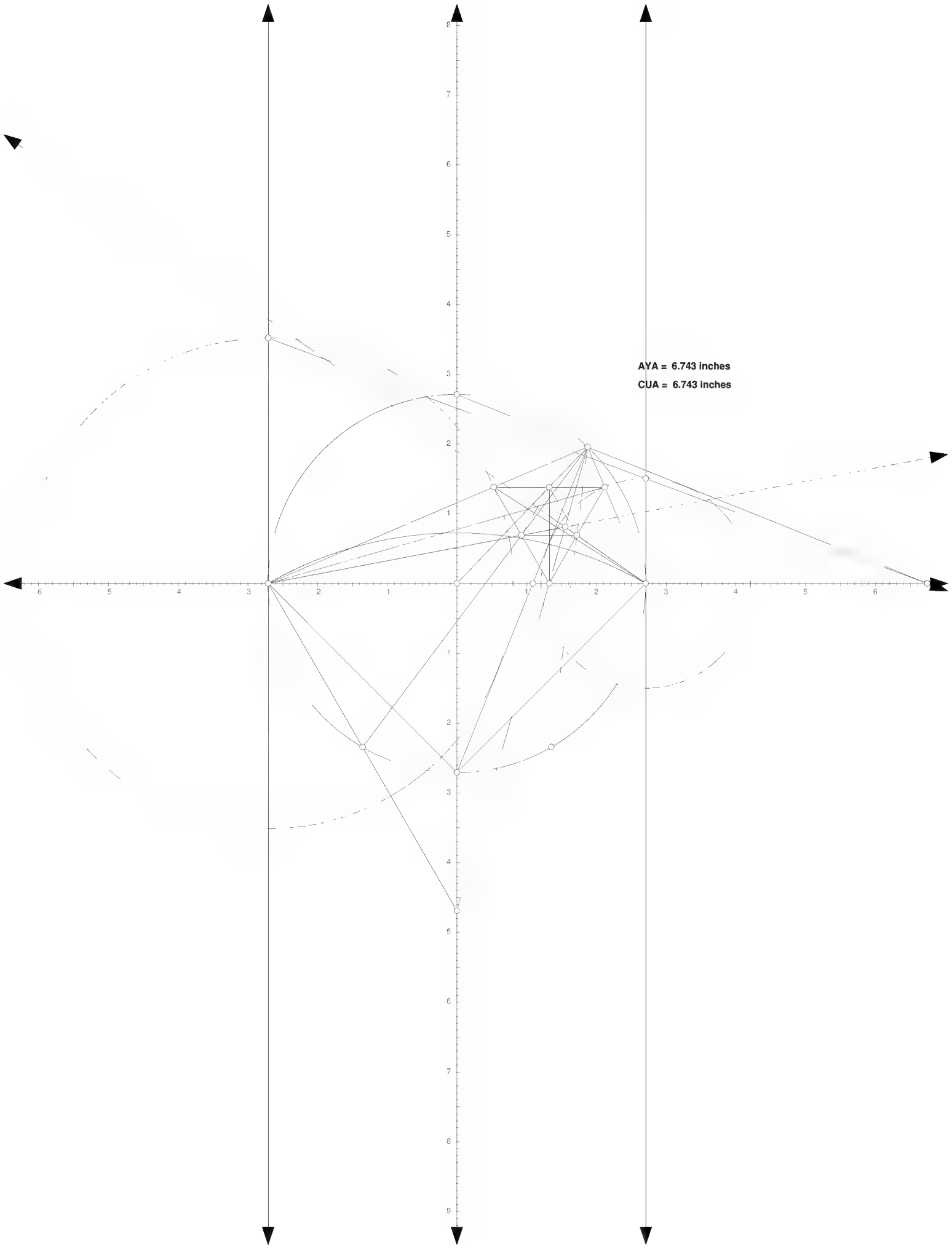

FVE = 1.260 inches
FZE = 1.978 inches
m∠ALLE = 11.663°
d
d
D
C
B

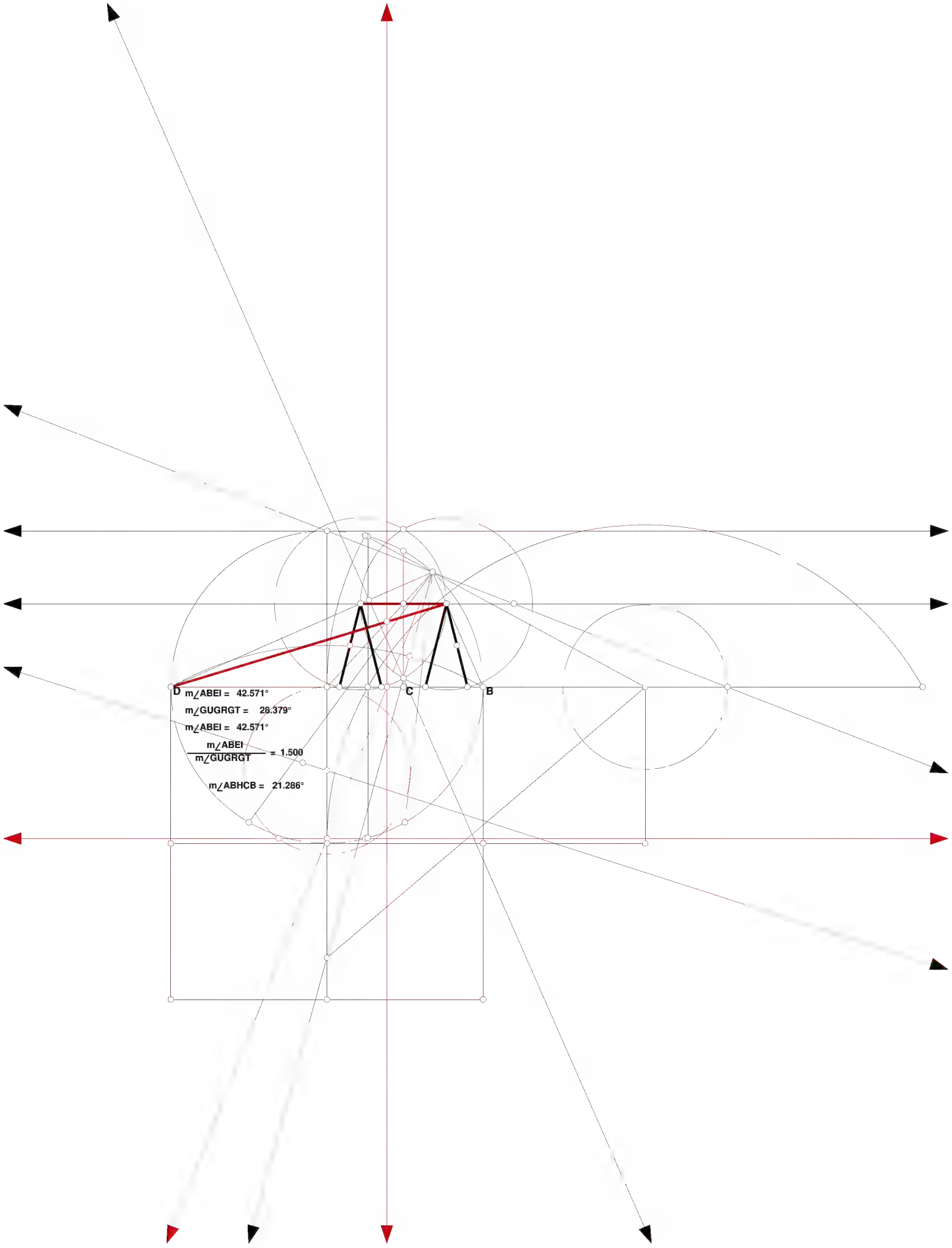

CICH = 0.352 inches
CHCD = 0.348 inches
m∠CICHCA = 40.695°
m∠JAC = 40.999°
CJA = 1.985 inches

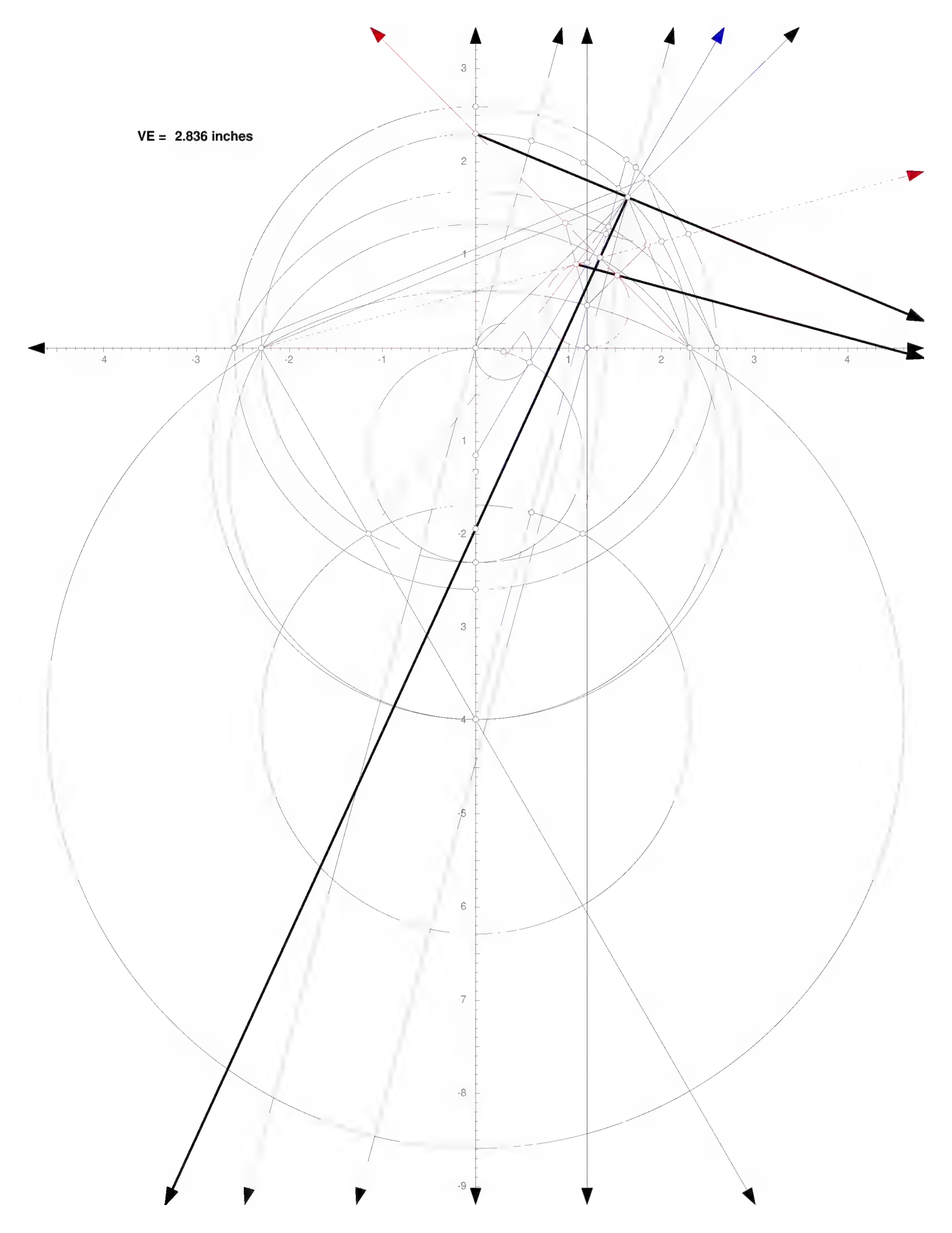

m∠JEA = 65.653°
m∠BNEA = 21.887°
m∠JEA / m∠BNEA = 3.000
m∠JAC = 41.307°
m∠JAC / m∠BJAC = 2.996
m∠BJAC = 13.788°
BKA = 4.813 inches
BIA = 4.808 inches
BKA - BIA = 0.005 inches

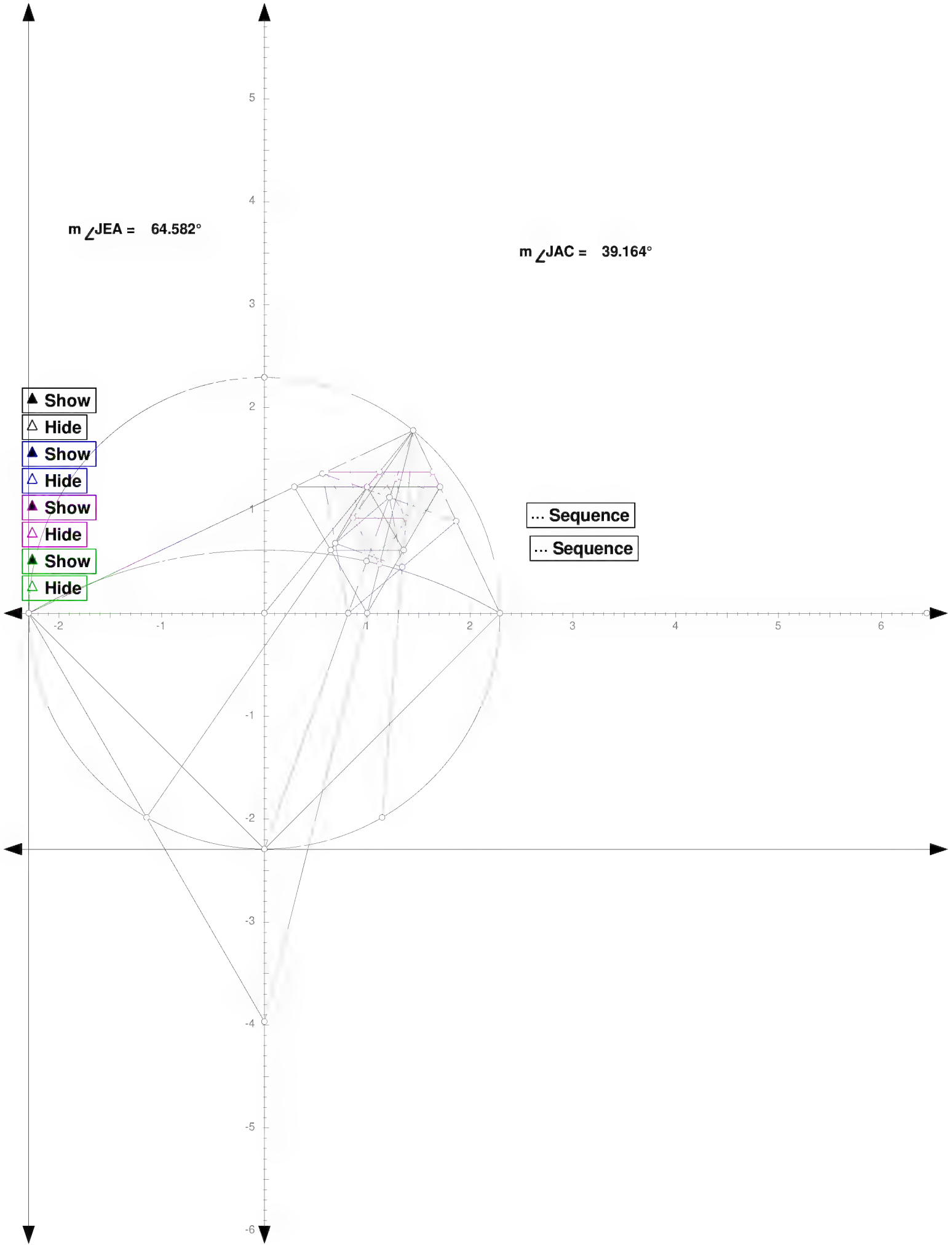

AYA = 6.743 inches
CUA = 6.743 inches

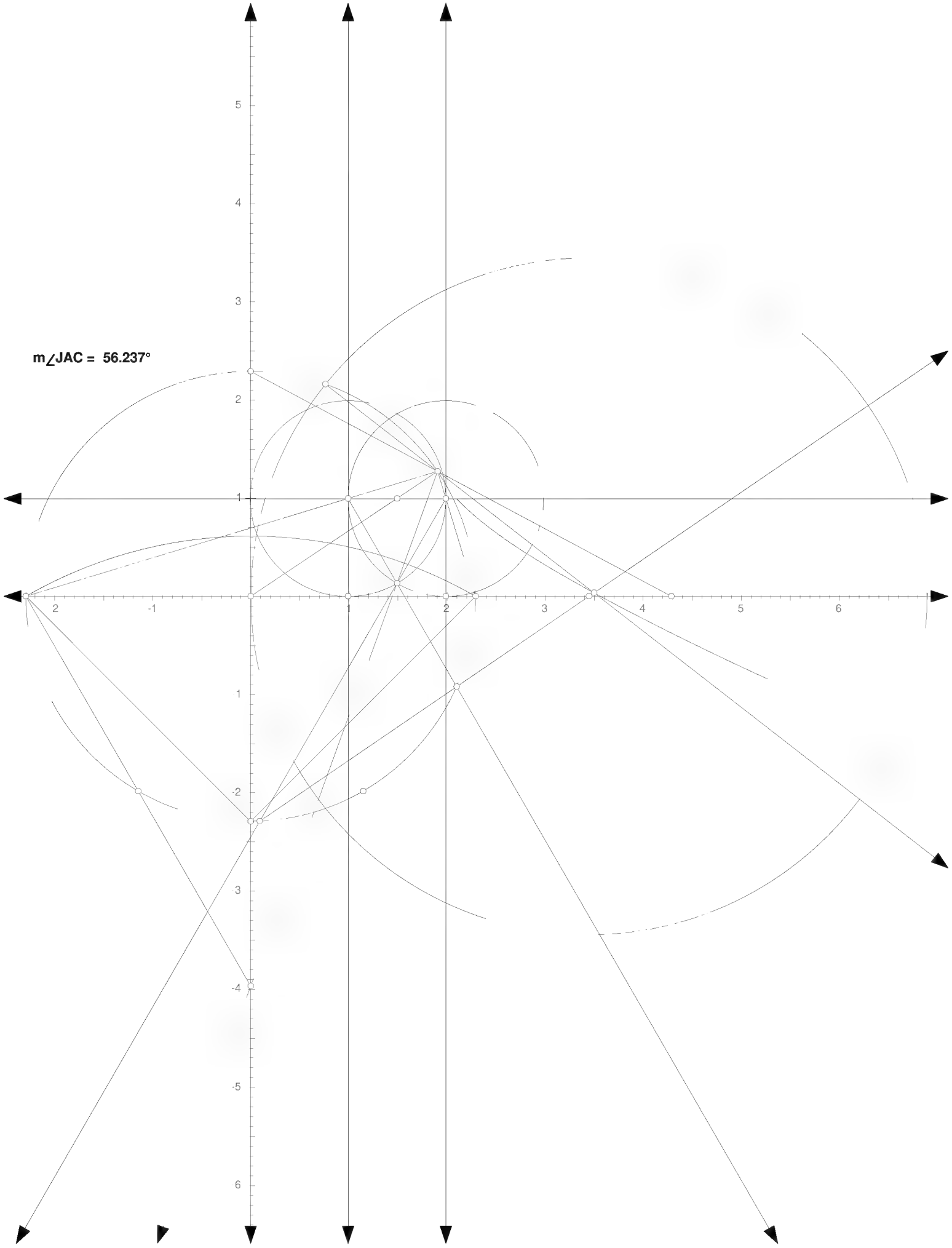

D
C
B
m∠ABEI = 42.571°
m∠GUGRGT = 28.379°
m∠ABEI = 42.571°
m∠ABEI / m∠GUGRGT = 1.500
m∠ABHCB = 21.286°

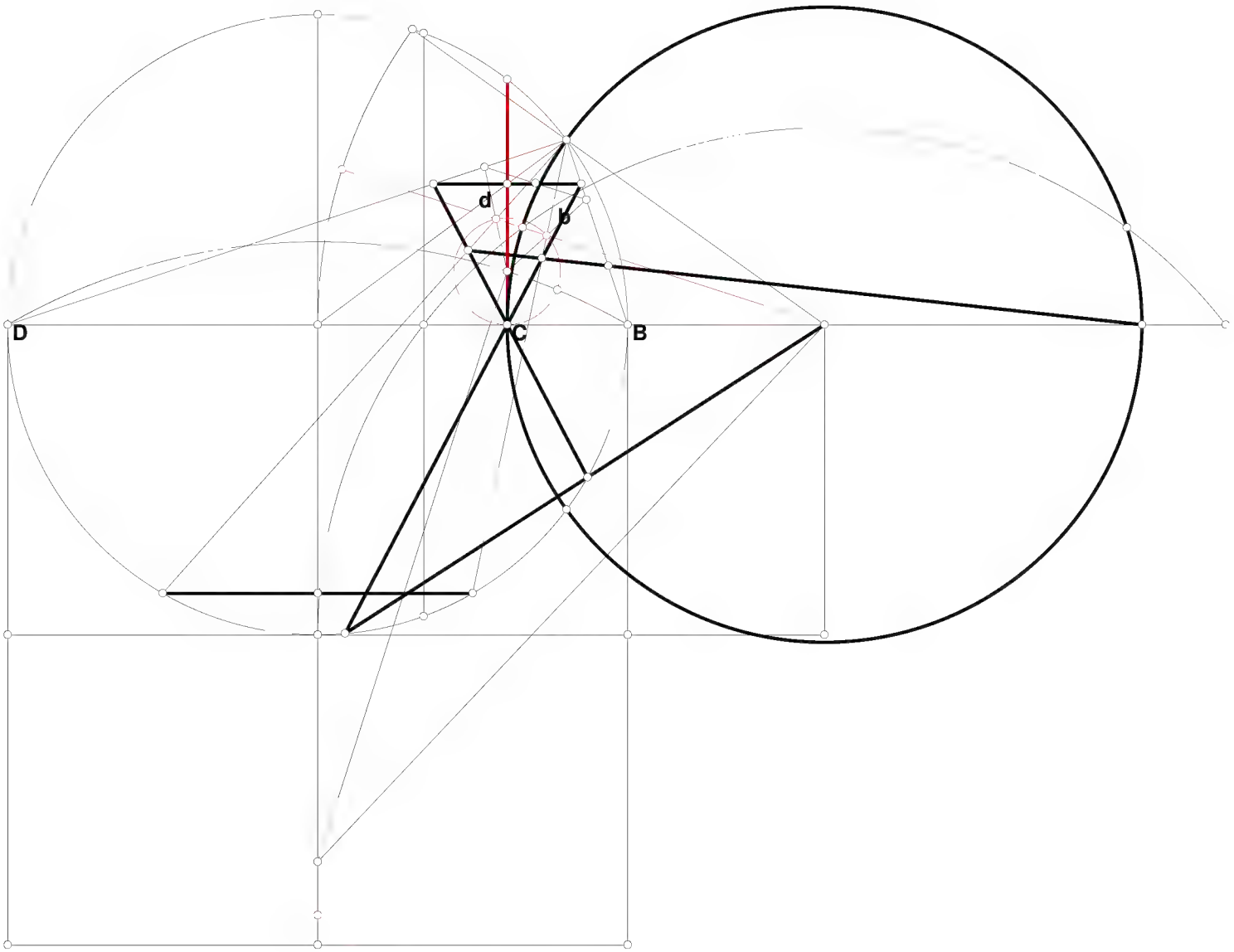

AYA = 6.743 inches
CUA = 6.743 inches

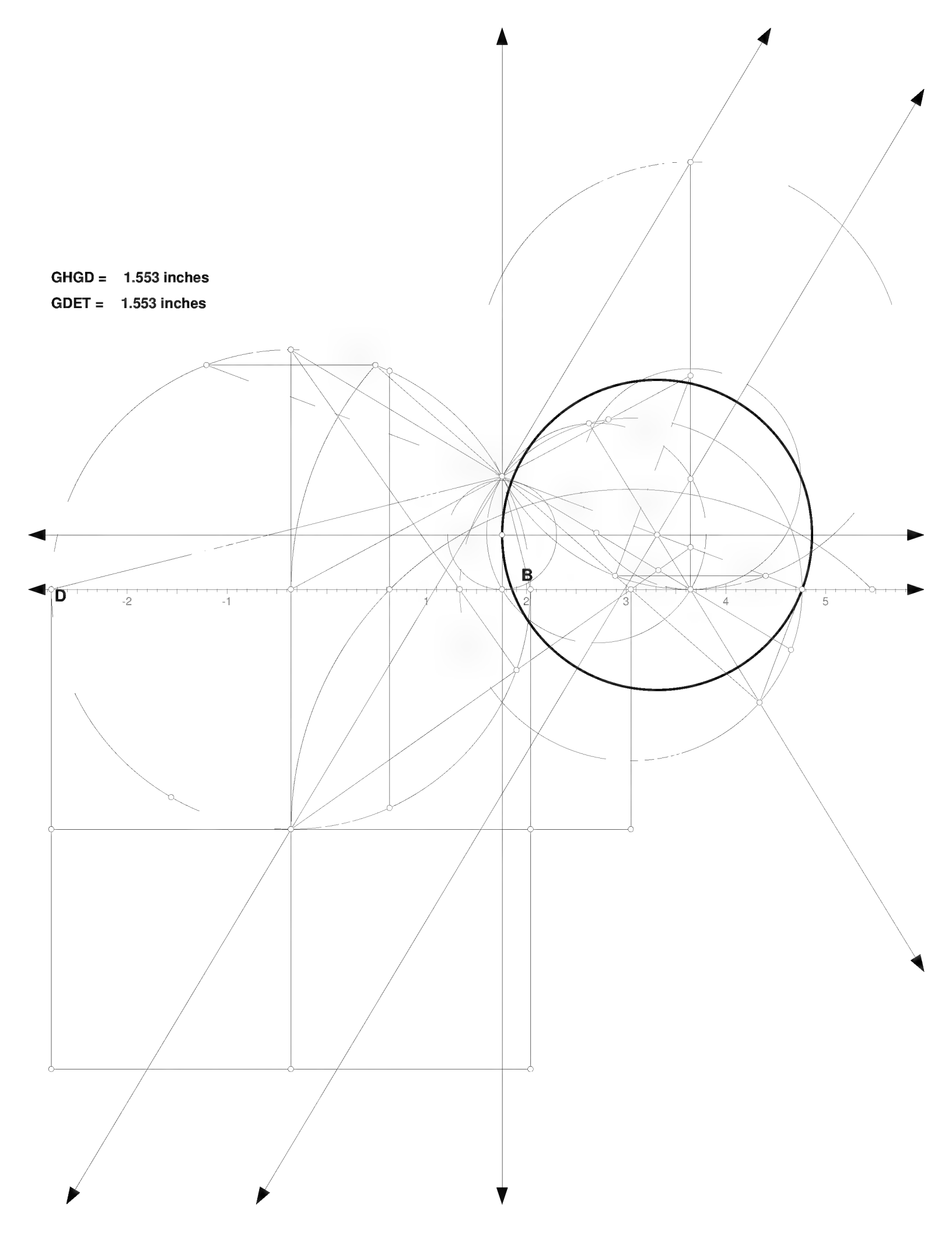

D
C
B
m∠ABEI = 42.571°
m∠GUGRGT = 28.379°
m∠ABEI = 42.571°
m∠ABEI / m∠GUGRGT = 1.500
m∠ABHCB = 21.286°

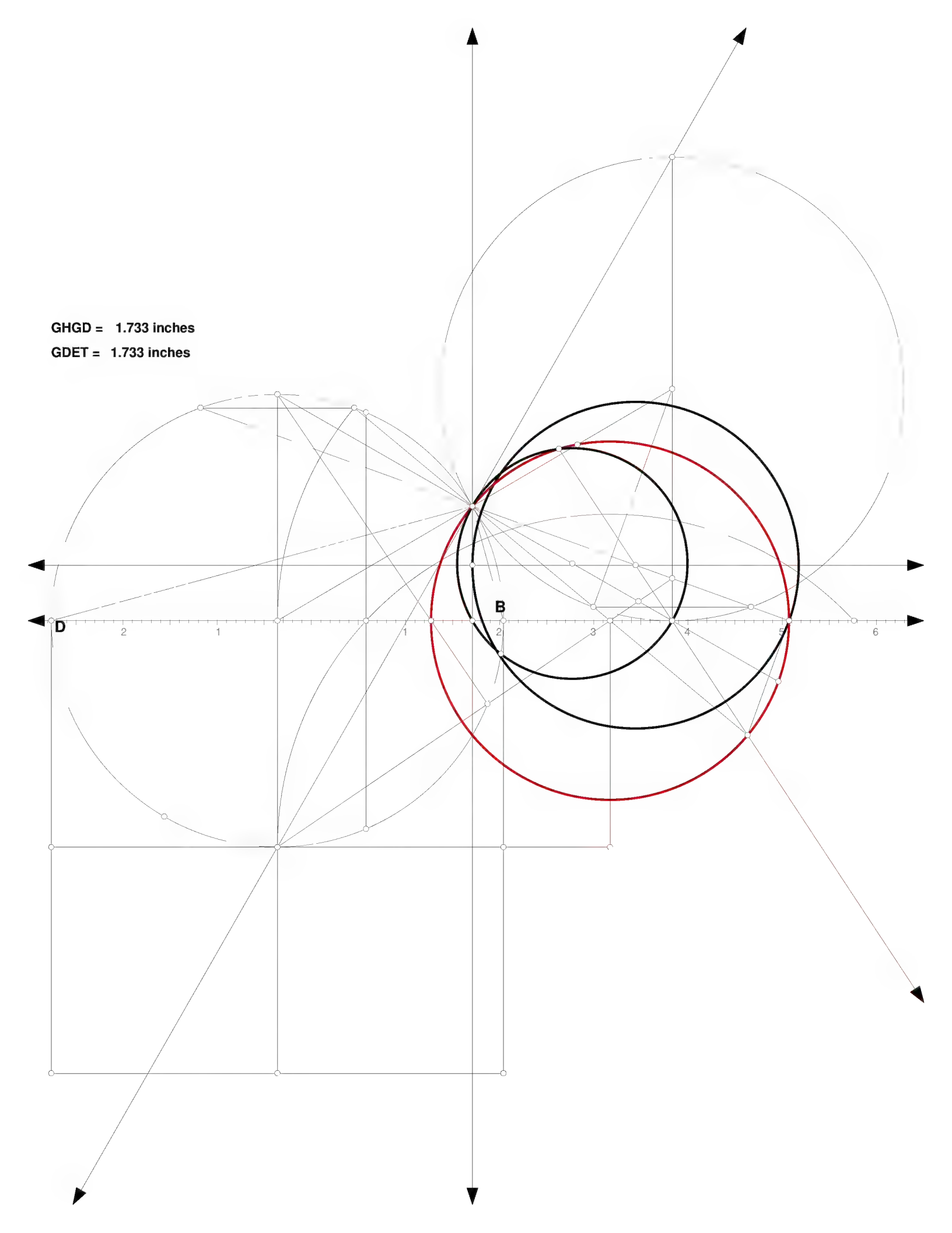

VE = 2.836 inches

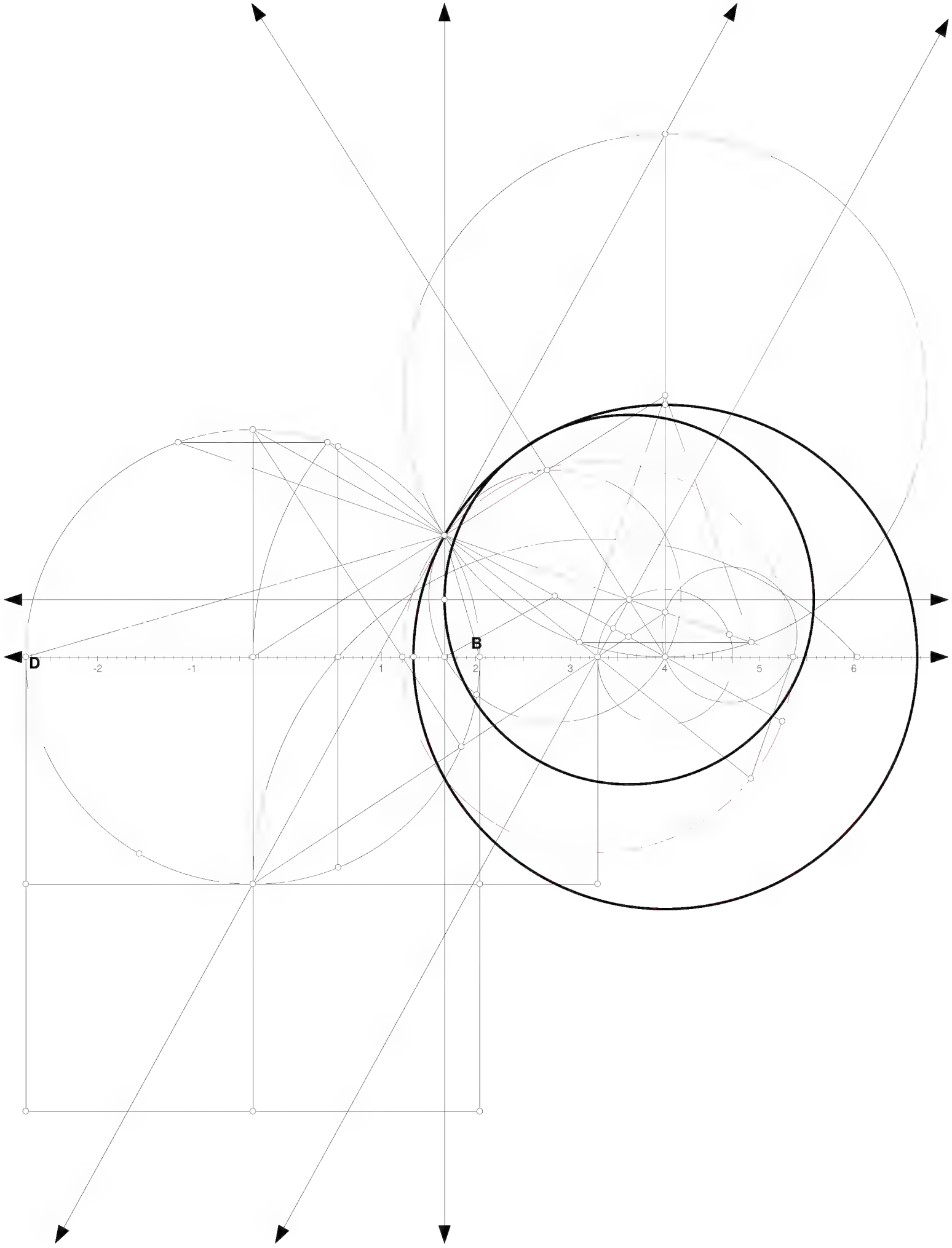

m ∠JEA = 64.582°
m ∠JAC = 39.164°
Show
Hide
Show
Hide
Show
Hide
Show
Hide
··· Sequence
··· Sequence

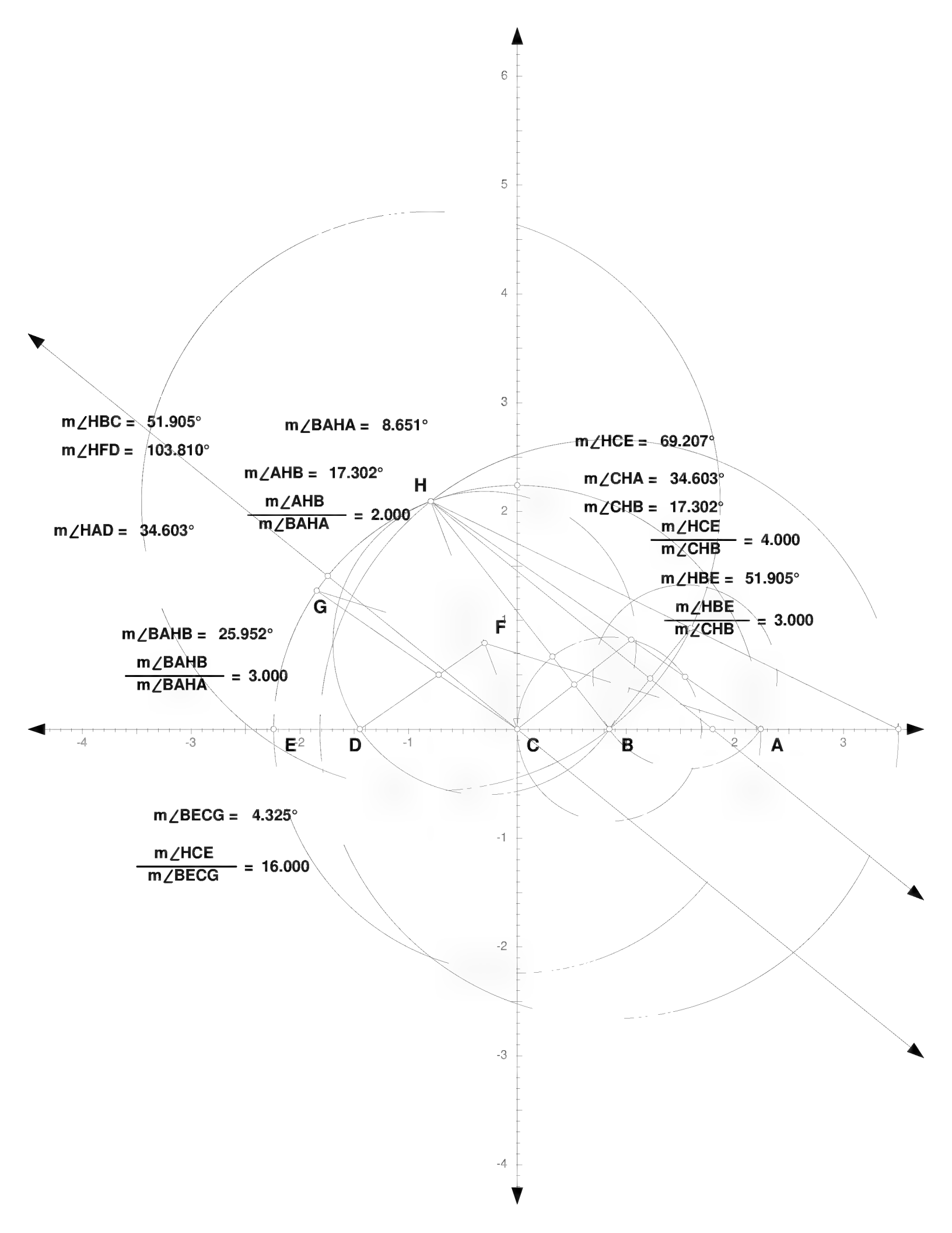

m∠JAC = 56.237°
5
4
3
2
1
-1
-2
-4
-5
6
-1
1
2
3
4
5
6

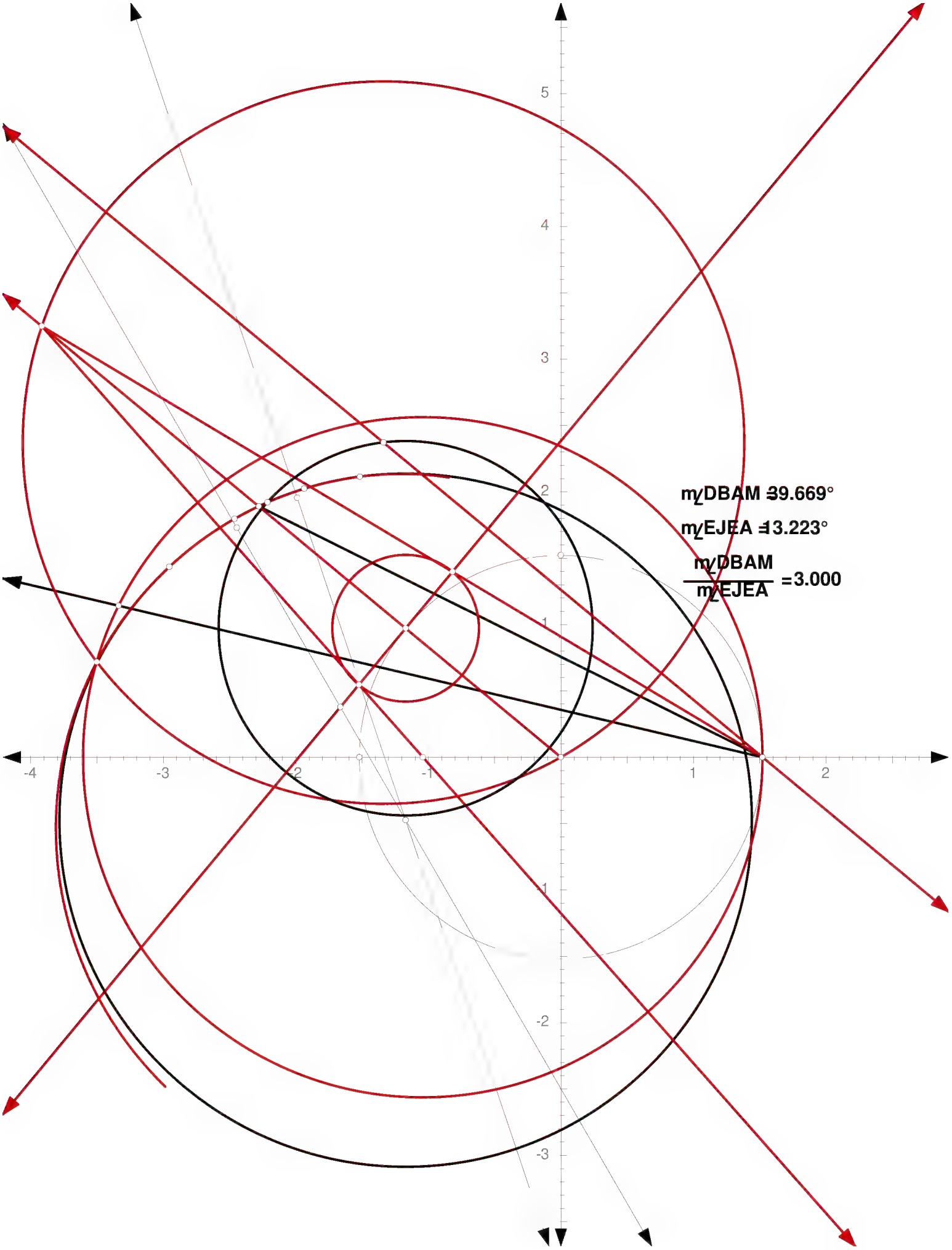

d
b
D
C
B

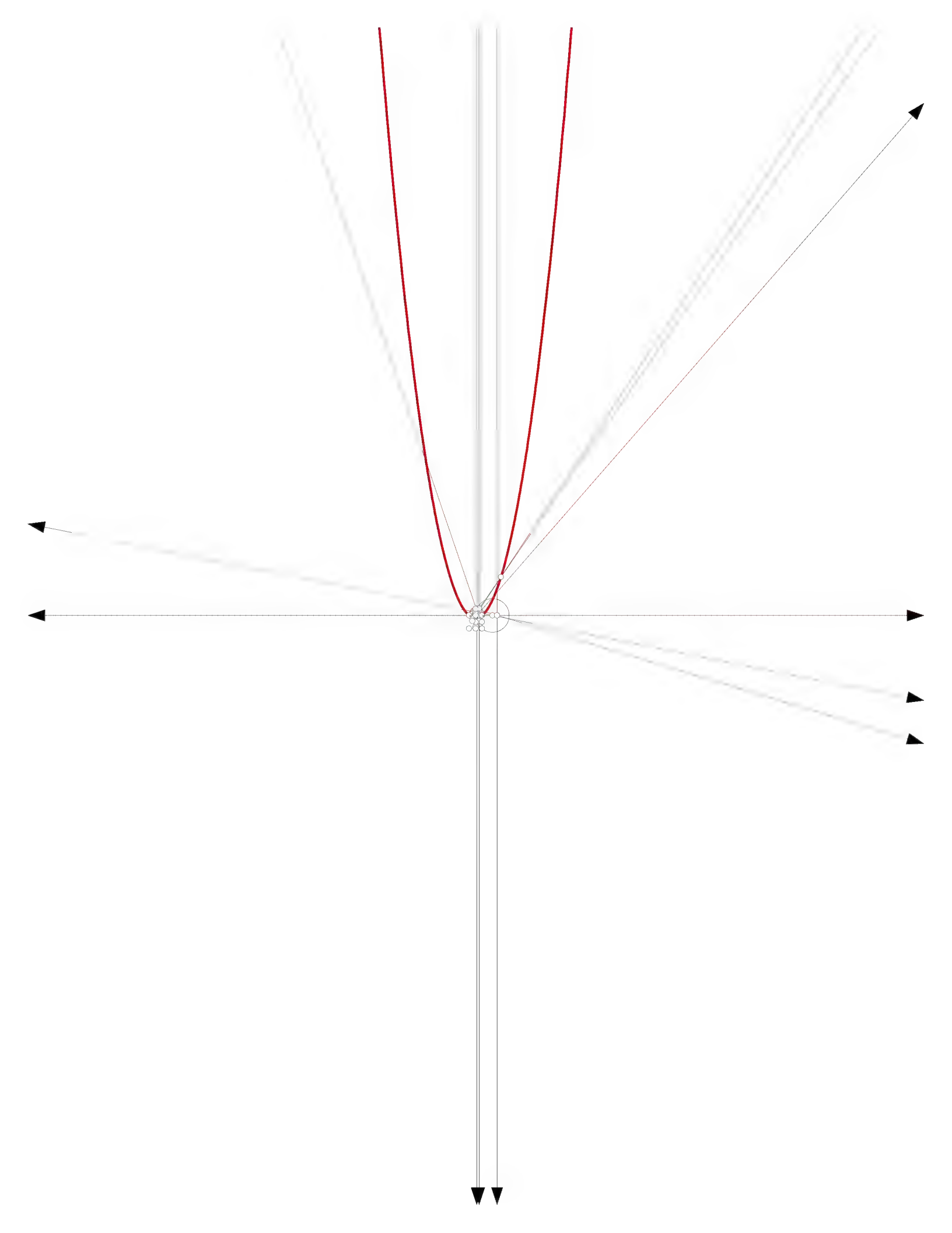

GHGD = 1.553 inches
GDET = 1.553 inches
D
B
-2
-1
1
2
3
4
5

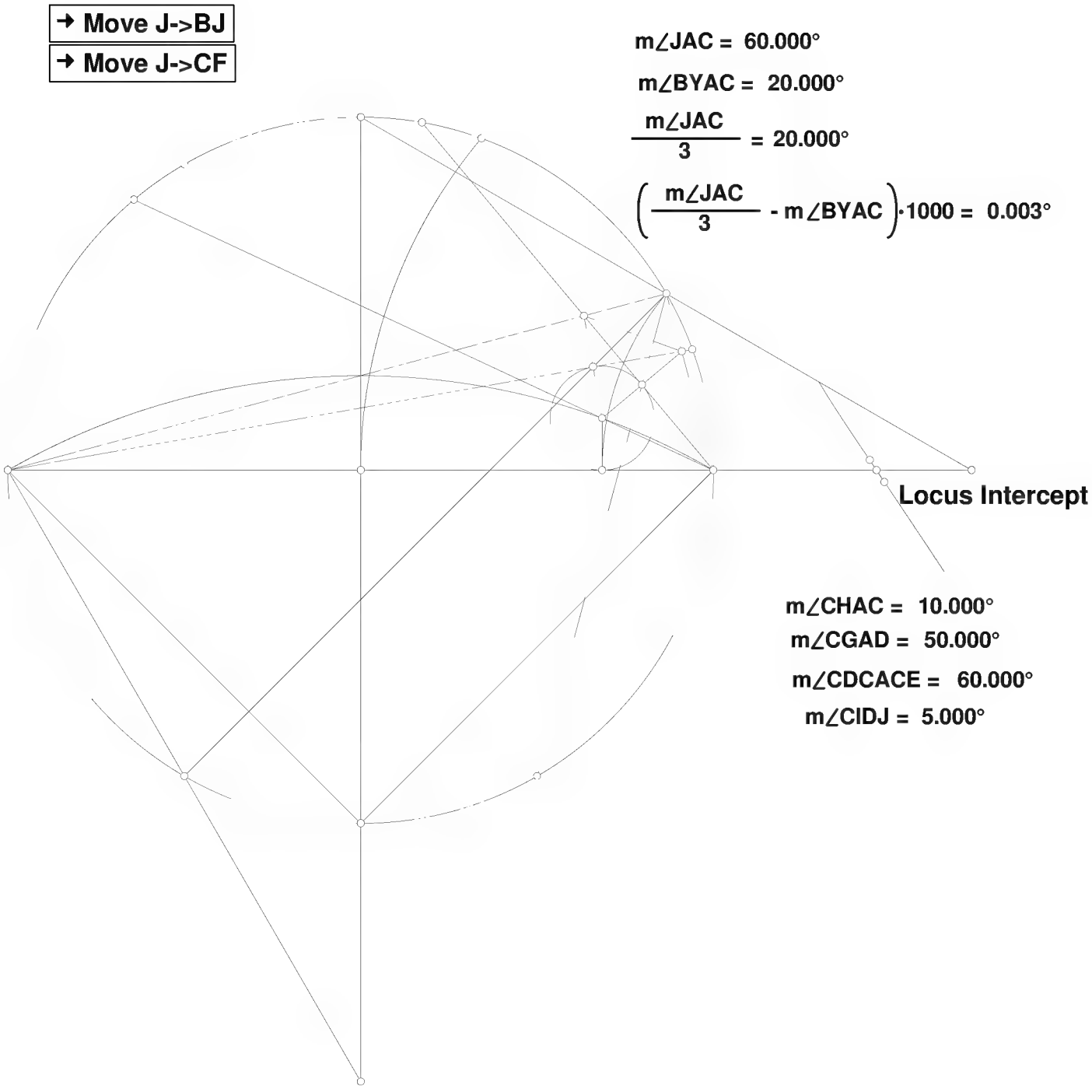

GHGD = 1.733 inches
GDET = 1.733 inches
D
B
2
1
1
2
3
4
5
6

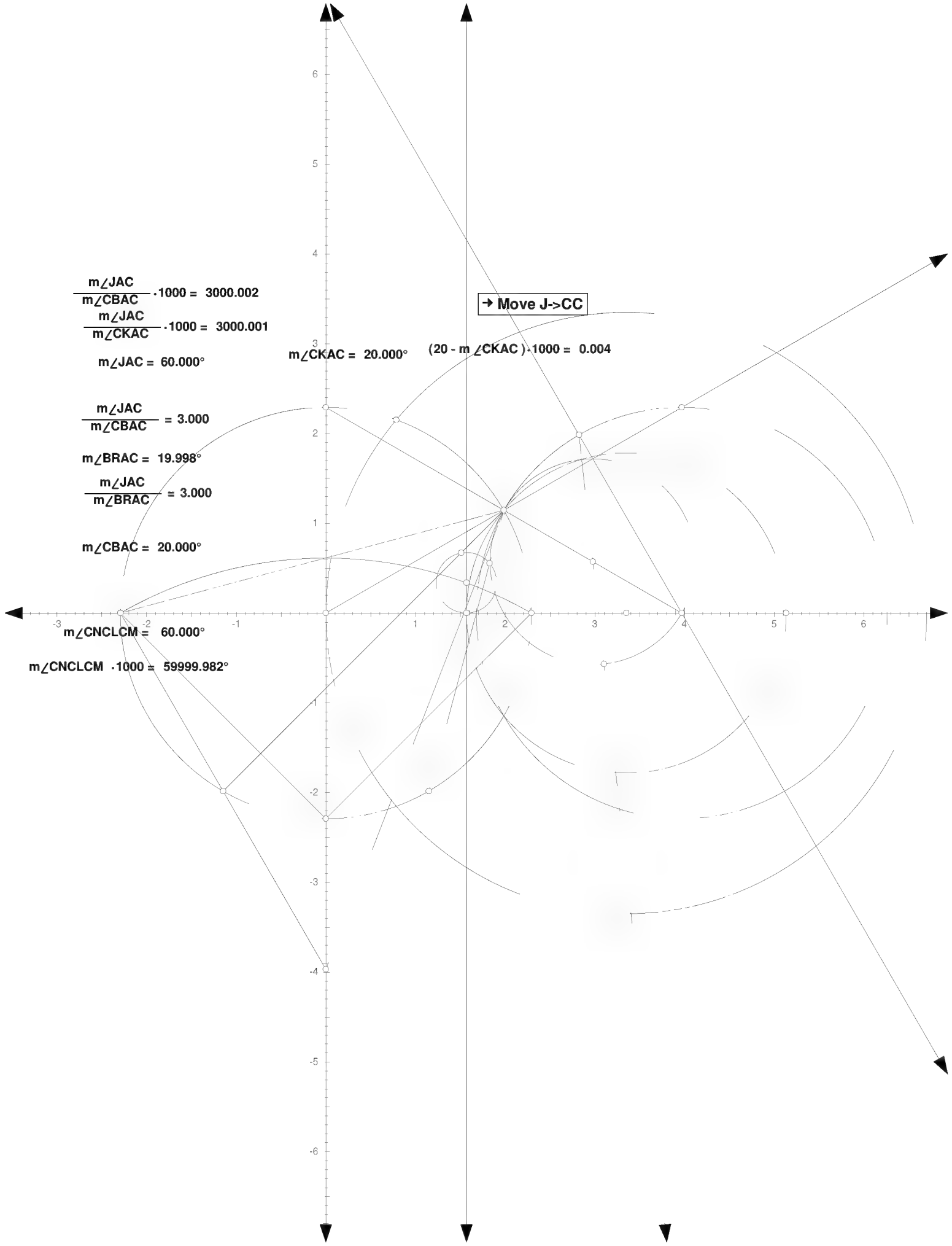

D
B
-2
-1
1
2
3
4
5
6

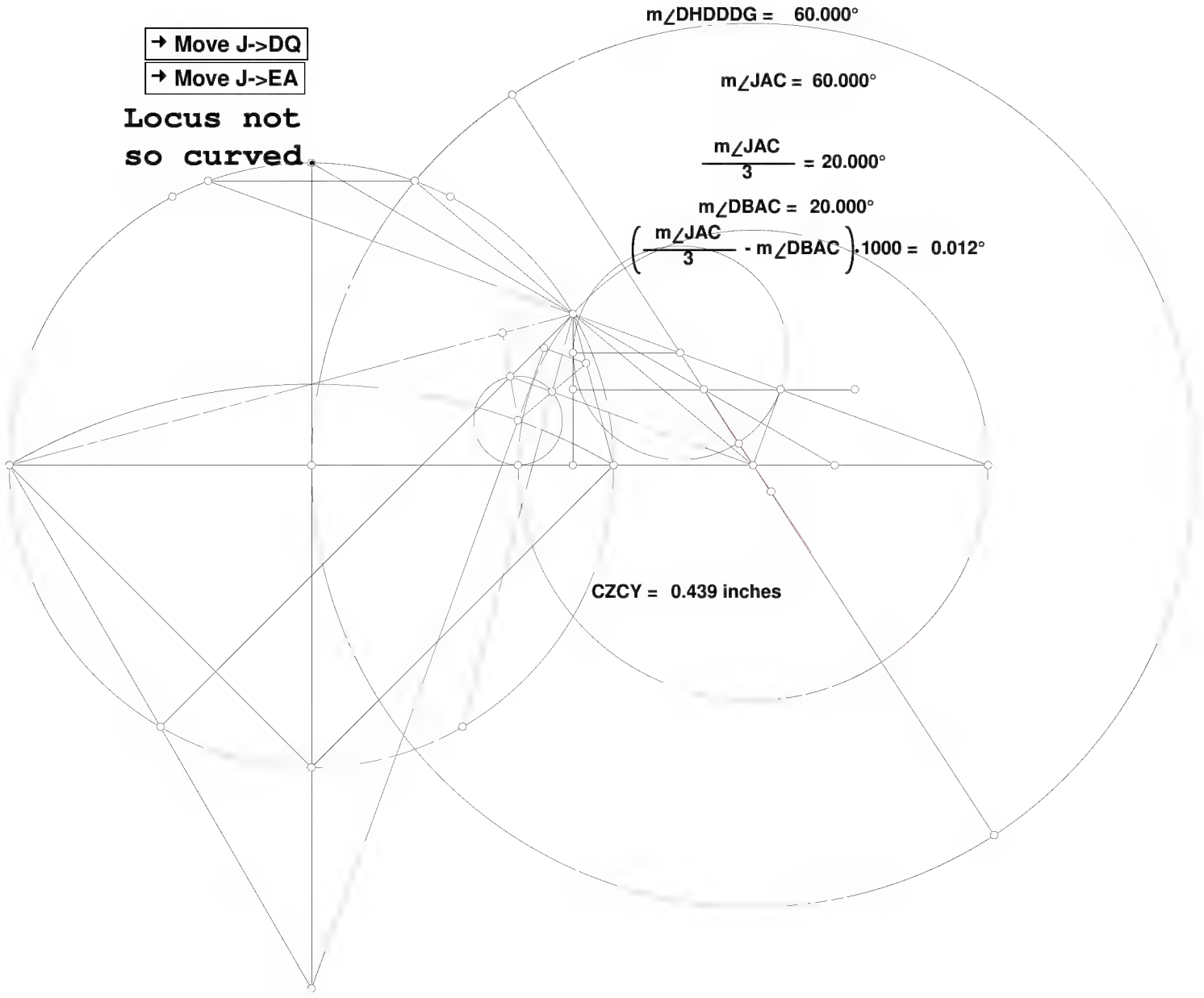

m∠HBC = 51.905°
m∠HFD = 103.810°
m∠HAD = 34.603°
m∠BAHA = 8.651°
m∠AHB = 17.302°
m∠AHB / m∠BAHA = 2.000
m∠HCE = 69.207°
m∠CHA = 34.603°
m∠CHB = 17.302°
m∠HCE / m∠CHB = 4.000
m∠HBE = 51.905°
m∠HBE / m∠CHB = 3.000
m∠BAHB = 25.952°
m∠BAHB / m∠BAHA = 3.000
m∠BECG = 4.325°
m∠HCE / m∠BECG = 16.000
H
G
F
E
D
C
B
A

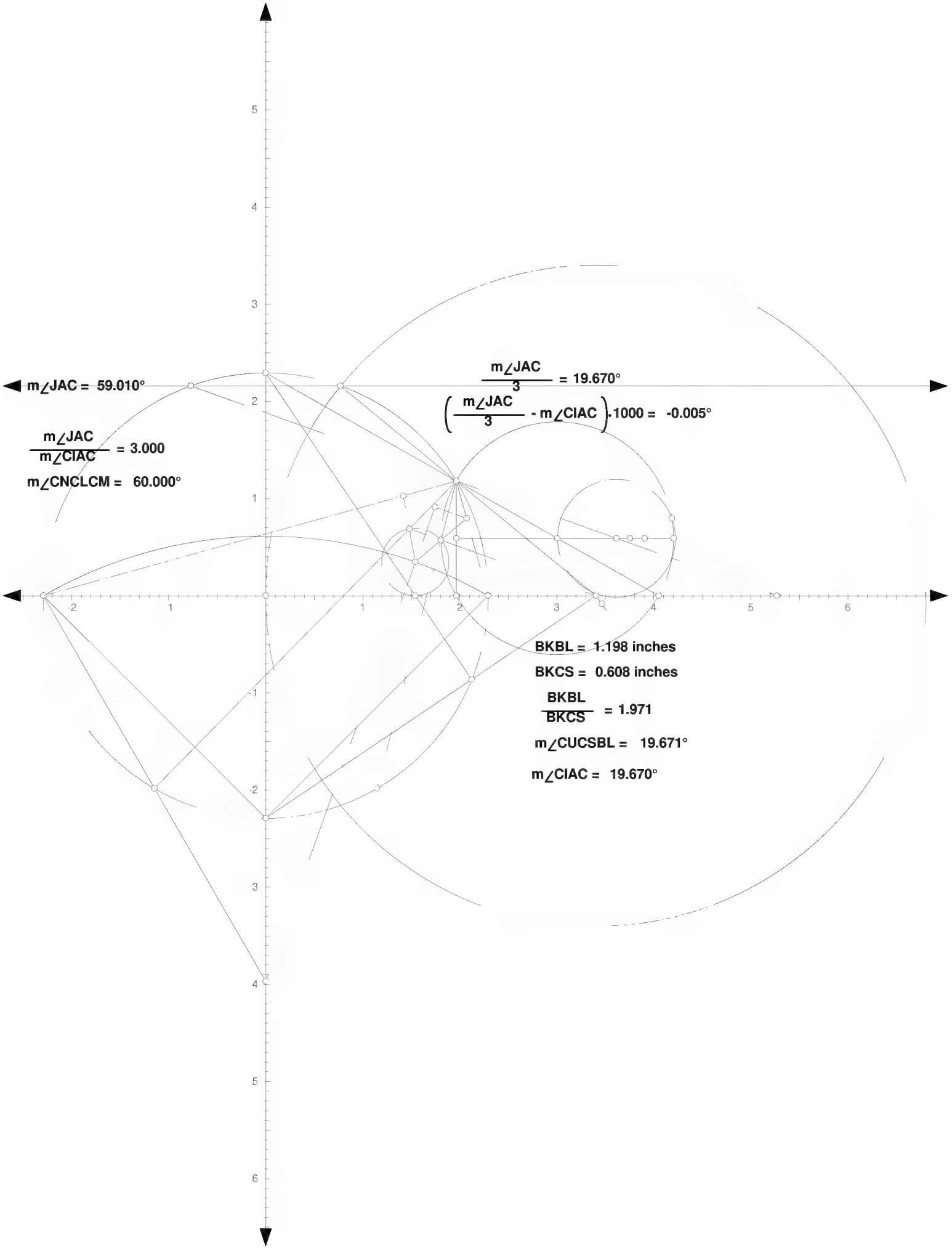

m∠DBAM = 39.669°
m∠EJEA = 13.223°
m∠DBAM / m∠EJEA = 3.000
5
4
3
2
1
-1
-2
-3
-4
-3
-2
-1
1
2

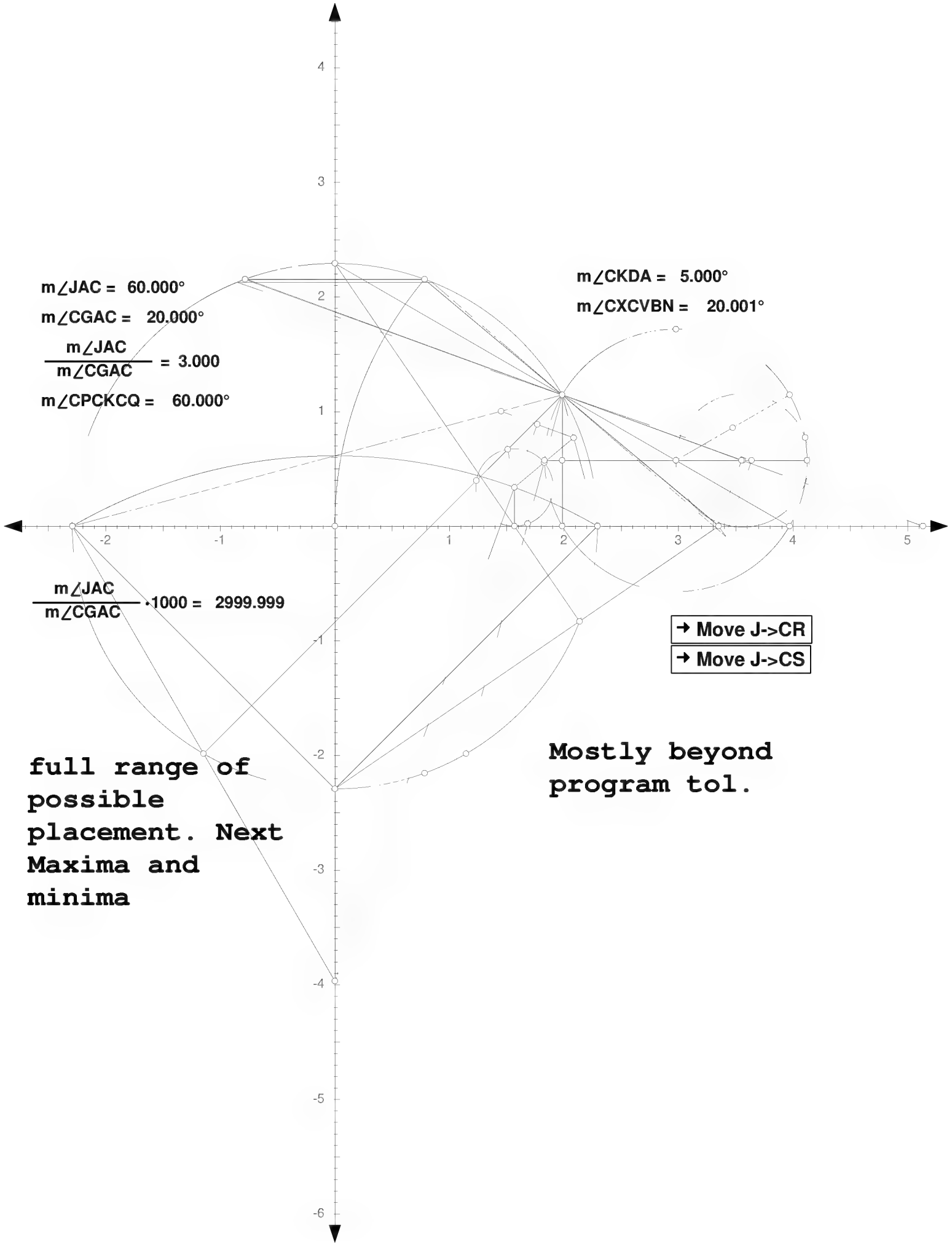


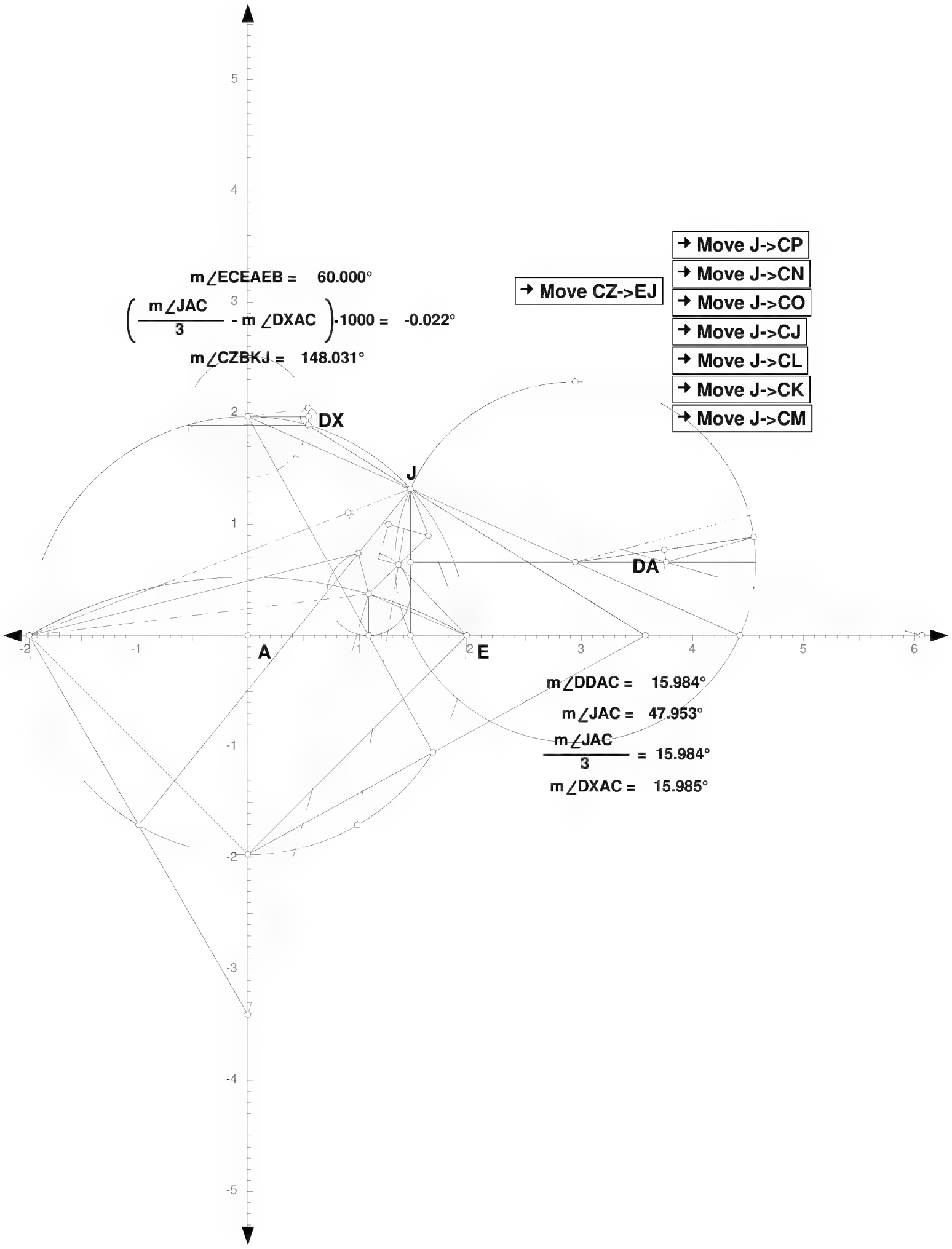

→ Move J->BJ
→ Move J->CF
m∠JAC = 60.000°
m∠BYAC = 20.000°
m∠JAC / 3 = 20.000°
(m∠JAC / 3 - m∠BYAC)·1000 = 0.003°
Locus Intercept
m∠CHAC = 10.000°
m∠CGAD = 50.000°
m∠CDCACE = 60.000°
m∠CIDJ = 5.000°

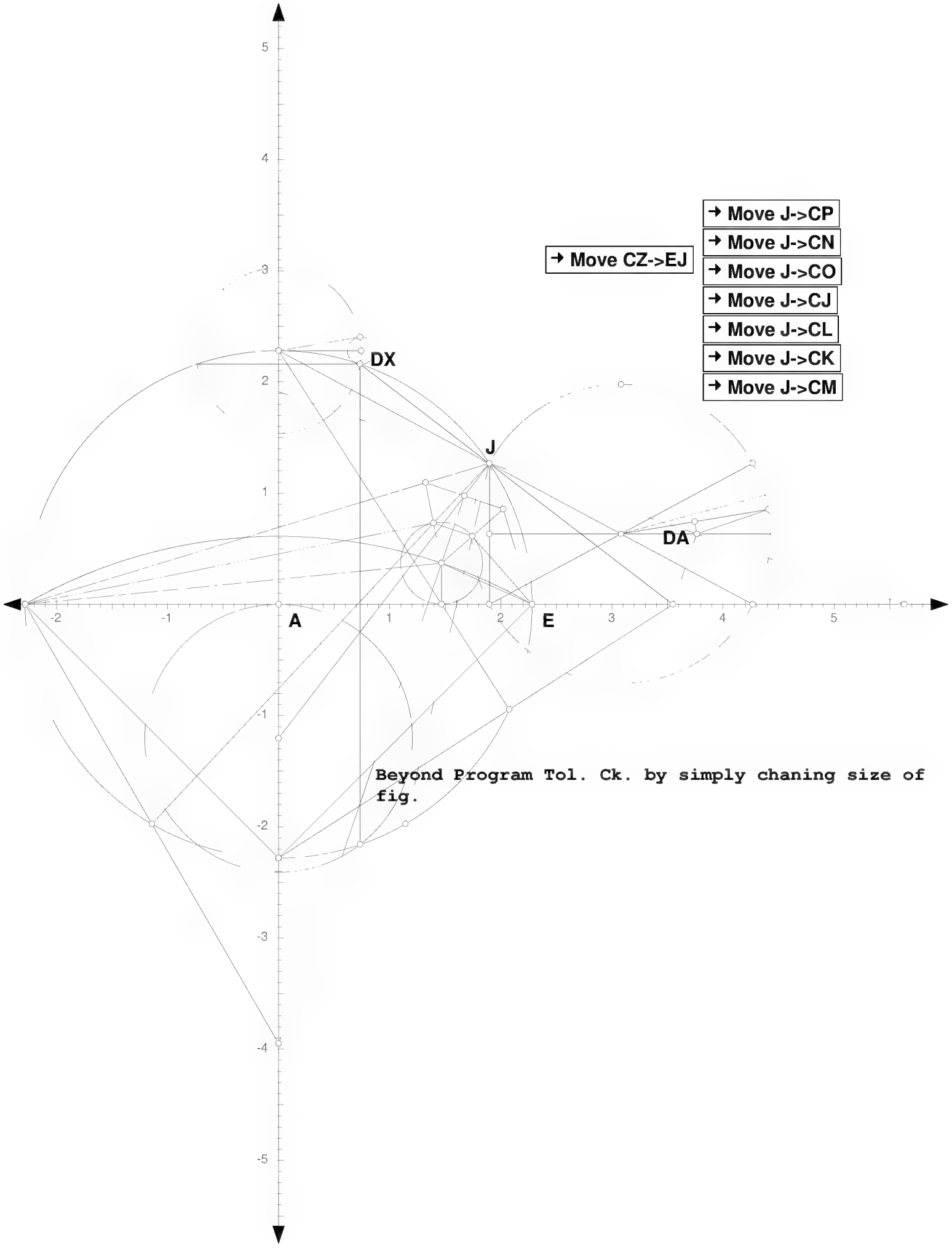

$\frac{m\angle JAC}{m\angle CBAC} \cdot 1000 = 3000.002$
$\frac{m\angle JAC}{m\angle CKAC} \cdot 1000 = 3000.001$
$m\angle JAC = 60.000°$
$\frac{m\angle JAC}{m\angle CBAC} = 3.000$
$m\angle BRAC = 19.998°$
$\frac{m\angle JAC}{m\angle BRAC} = 3.000$
$m\angle CBAC = 20.000°$
$m\angle CKAC = 20.000°$
$(20 - m\angle CKAC) \cdot 1000 = 0.004$
→ Move J->CC
$m\angle CNCLCM = 60.000°$
$m\angle CNCLCM \cdot 1000 = 59999.982°$

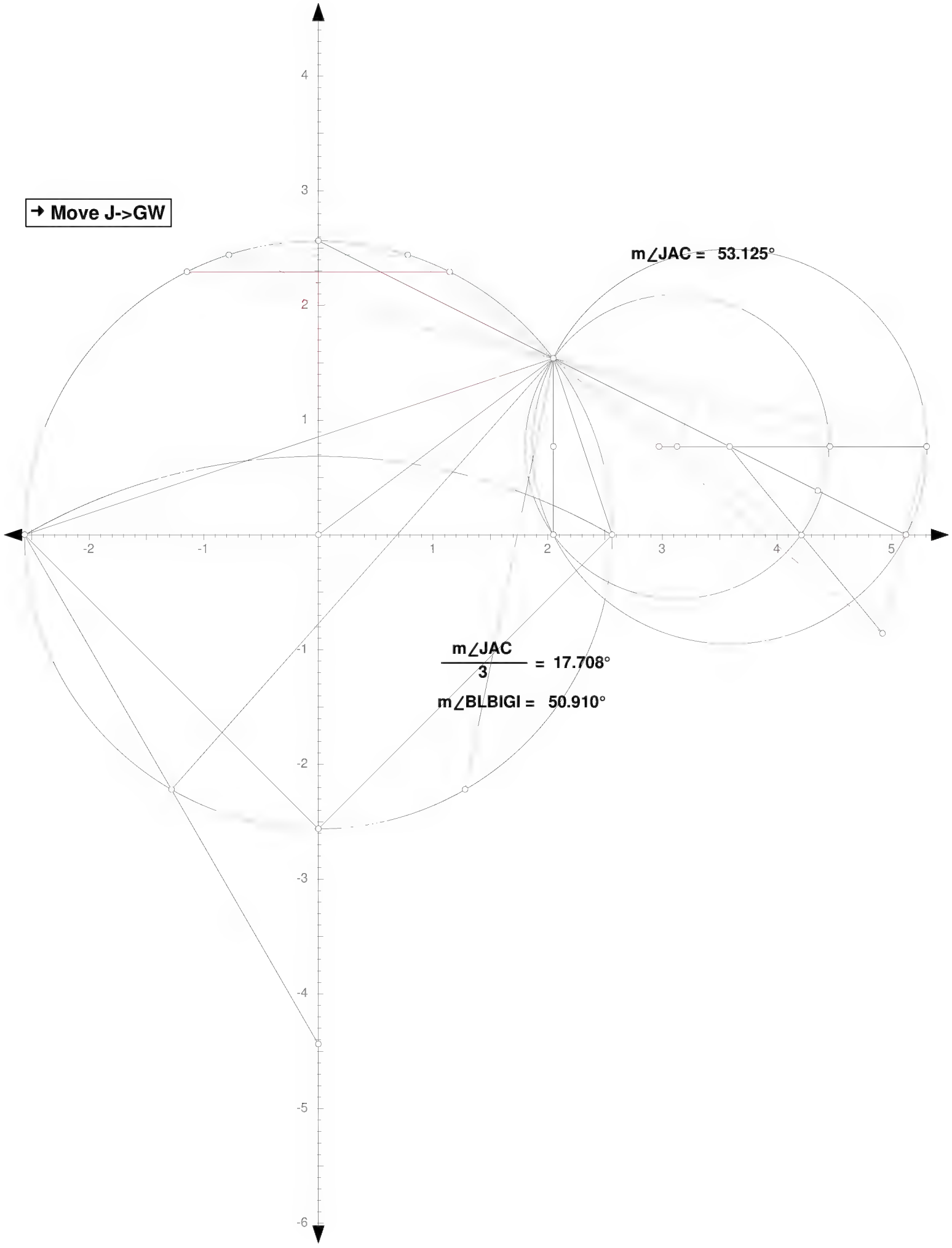

→ Move J->DQ
→ Move J->EA
Locus not so curved.
m∠DHDDDG = 60.000°
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠DBAC = 20.000°
(m∠JAC / 3 - m∠DBAC)·1000 = 0.012°
CZCY = 0.439 inches

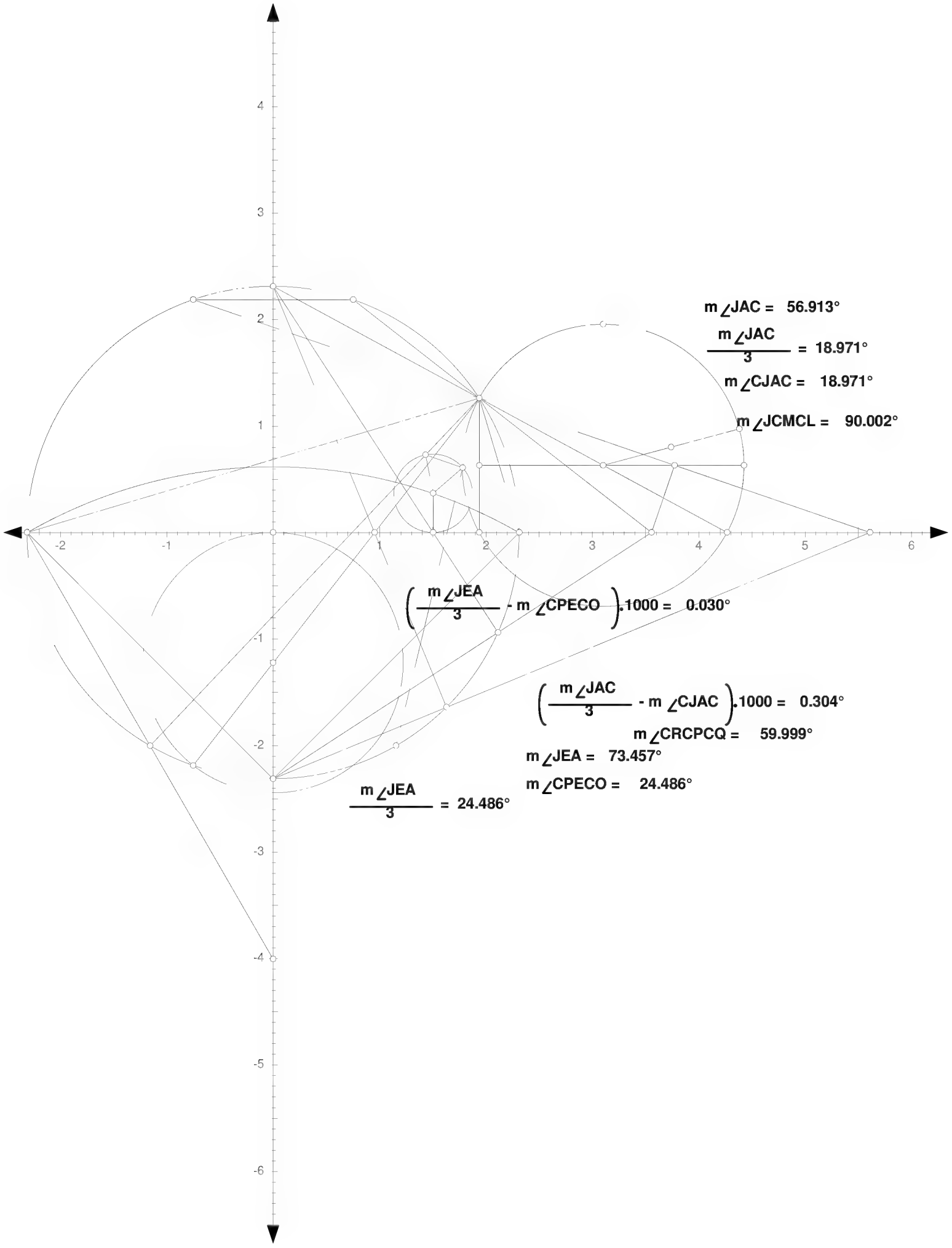

m∠JAC = 59.010°
m∠JAC / 3 = 19.670°
(m∠JAC / 3 - m∠CIAC) · 1000 = -0.005°
m∠JAC / m∠CIAC = 3.000
m∠CNCLCM = 60.000°
BKBL = 1.198 inches
BKCS = 0.608 inches
BKBL / BKCS = 1.971
m∠CUCSBL = 19.671°
m∠CIAC = 19.670°

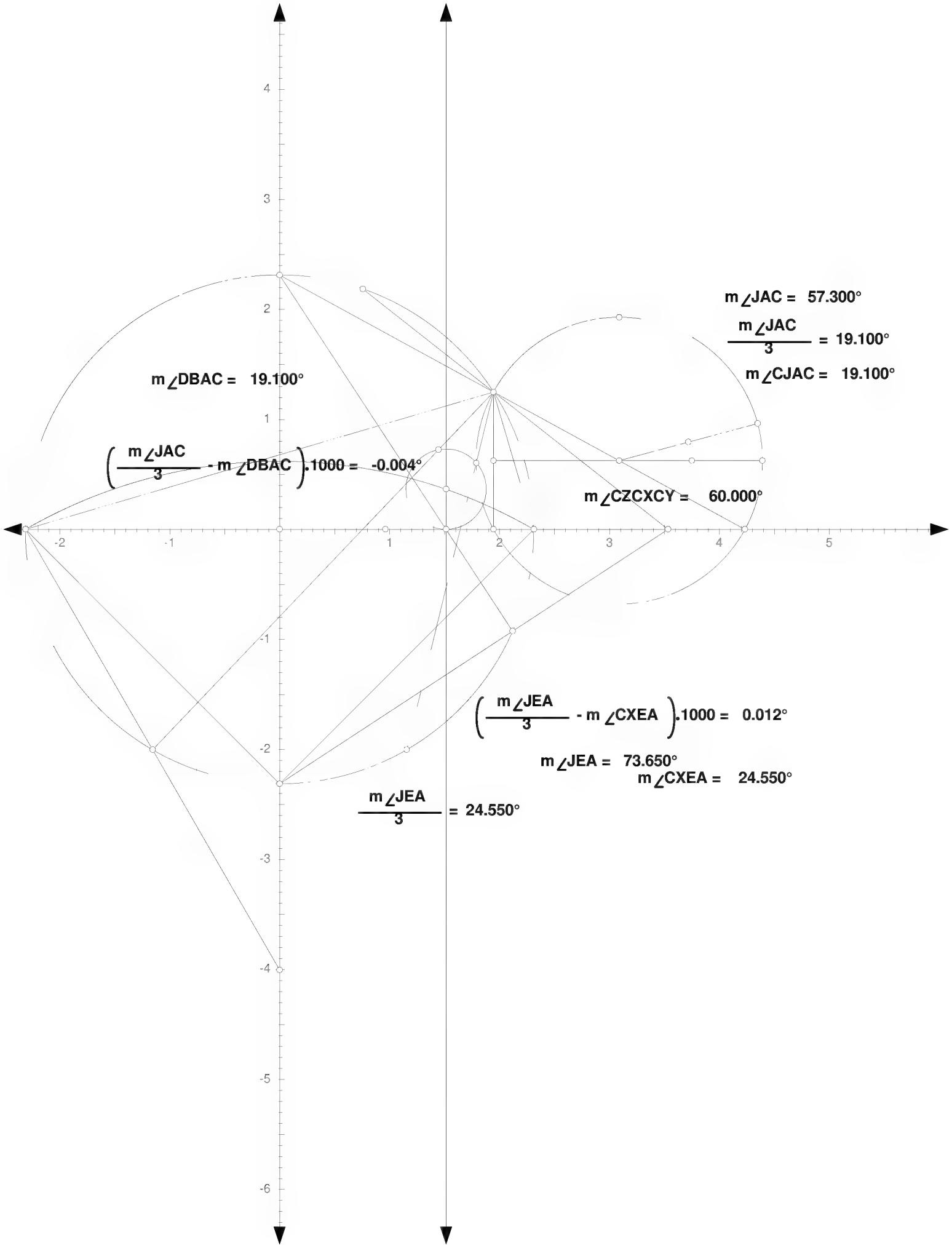

m∠JAC = 60.000°
m∠CGAC = 20.000°
m∠JAC / m∠CGAC = 3.000
m∠CPCKCQ = 60.000°
m∠CKDA = 5.000°
m∠CXCVBN = 20.001°
m∠JAC / m∠CGAC ·1000 = 2999.999
→ Move J->CR
→ Move J->CS
full range of possible placement. Next Maxima and minima
Mostly beyond program tol.

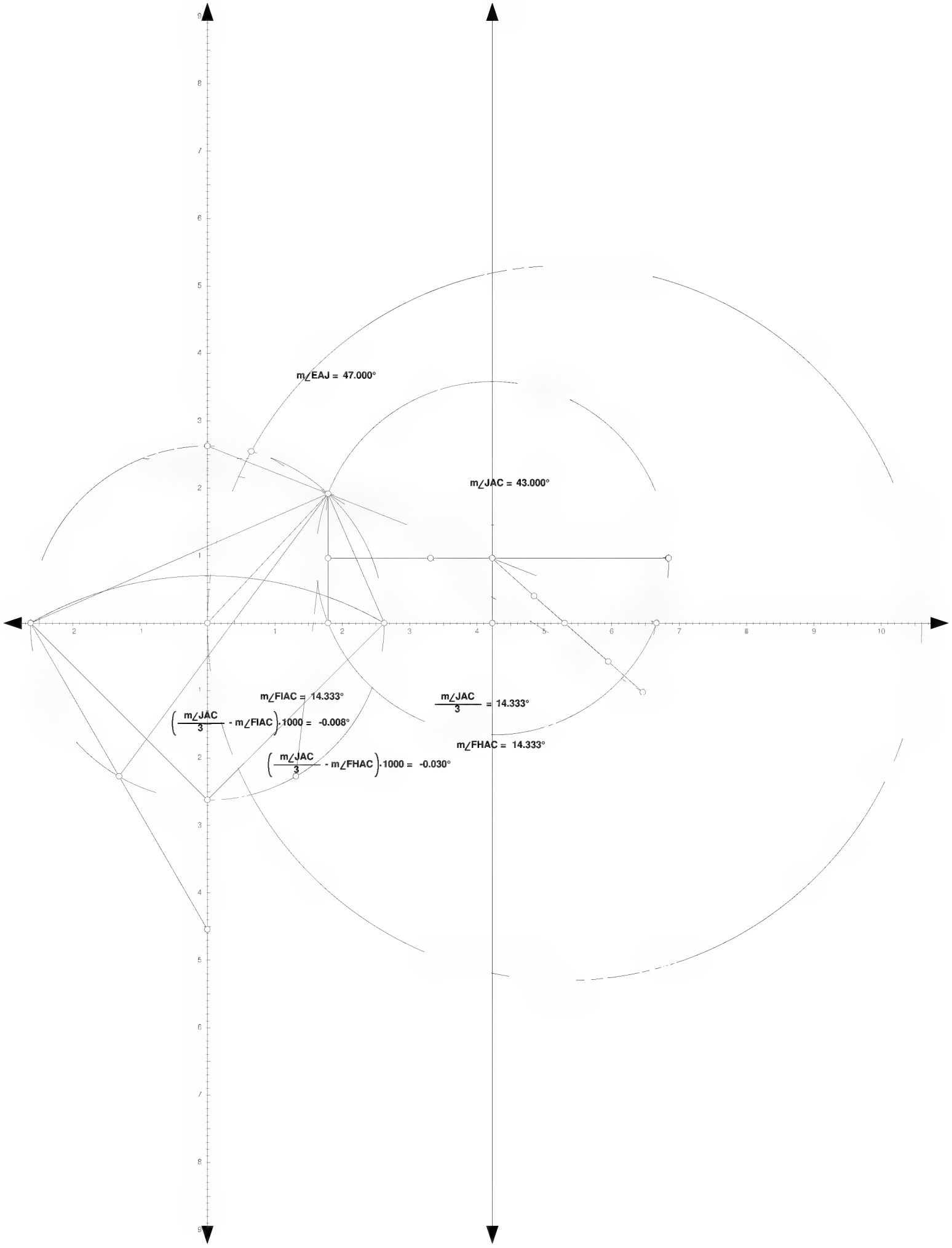

m∠ECEAEB = 60.000°
$\left(\frac{m\angle JAC}{3} - m\angle DXAC\right)\cdot 1000 = -0.022°$
m∠CZBKJ = 148.031°
→ Move CZ->EJ
→ Move J->CP
→ Move J->CN
→ Move J->CO
→ Move J->CJ
→ Move J->CL
→ Move J->CK
→ Move J->CM
DX
J
DA
A
E
m∠DDAC = 15.984°
m∠JAC = 47.953°
$\frac{m\angle JAC}{3} = 15.984°$
m∠DXAC = 15.985°

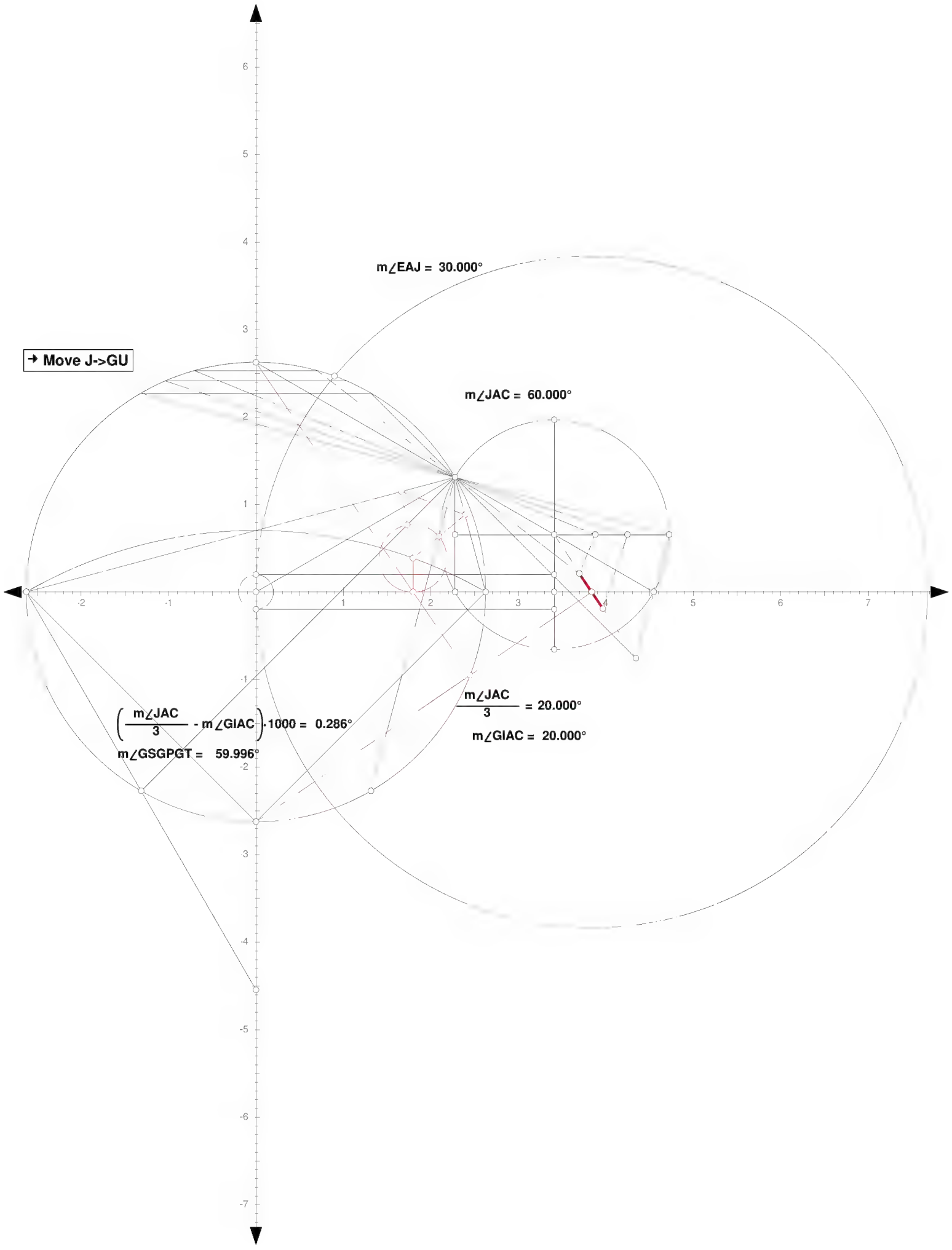

→ Move J->CP
→ Move J->CN
→ Move J->CO
→ Move J->CJ
→ Move J->CL
→ Move J->CK
→ Move J->CM
→ Move CZ->EJ
DX
J
DA
A
E
Beyond Program Tol. Ck. by simply chaning size of fig.

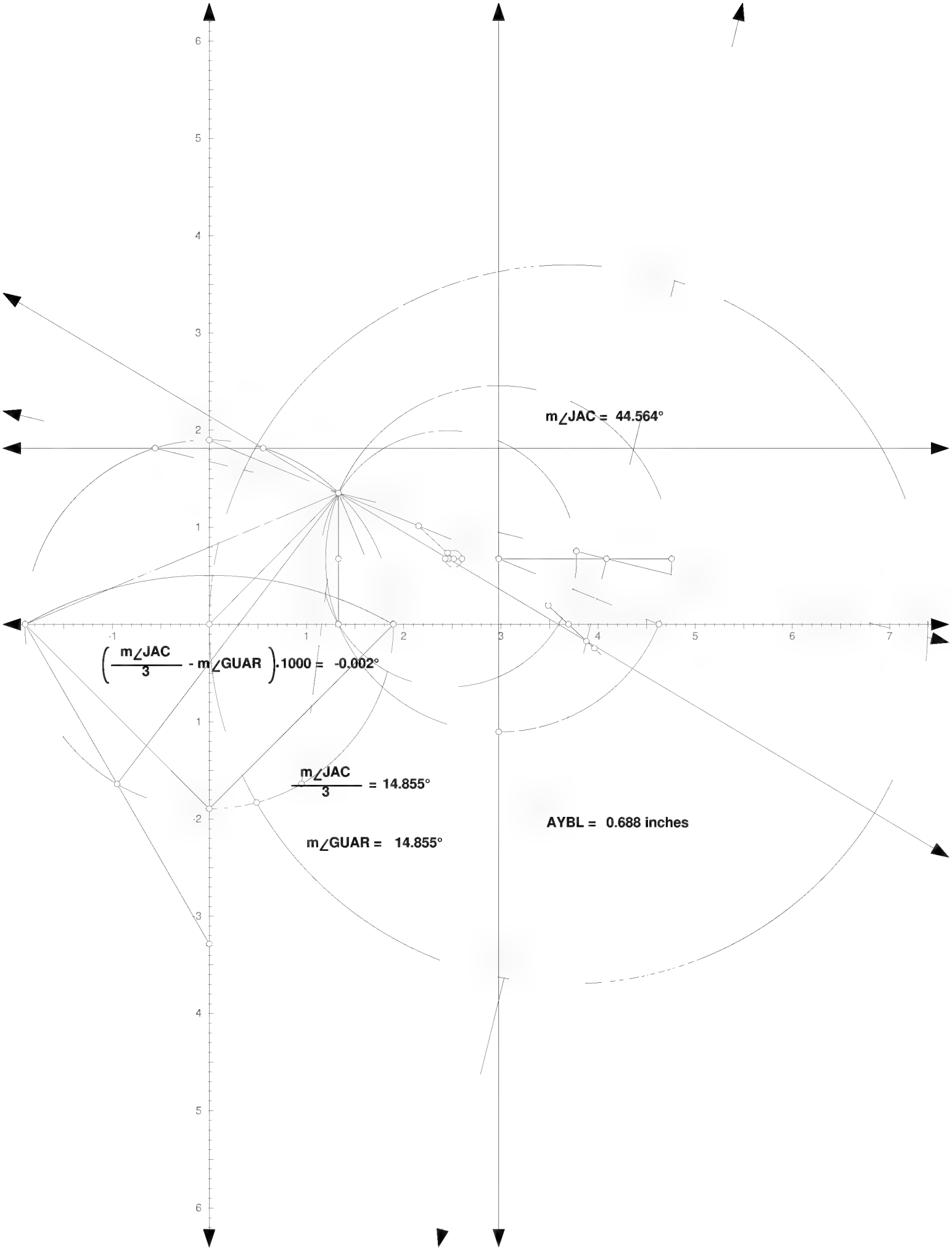

→ Move J->GW
m∠JAC = 53.125°
m∠JAC / 3 = 17.708°
m∠BLBIGI = 50.910°

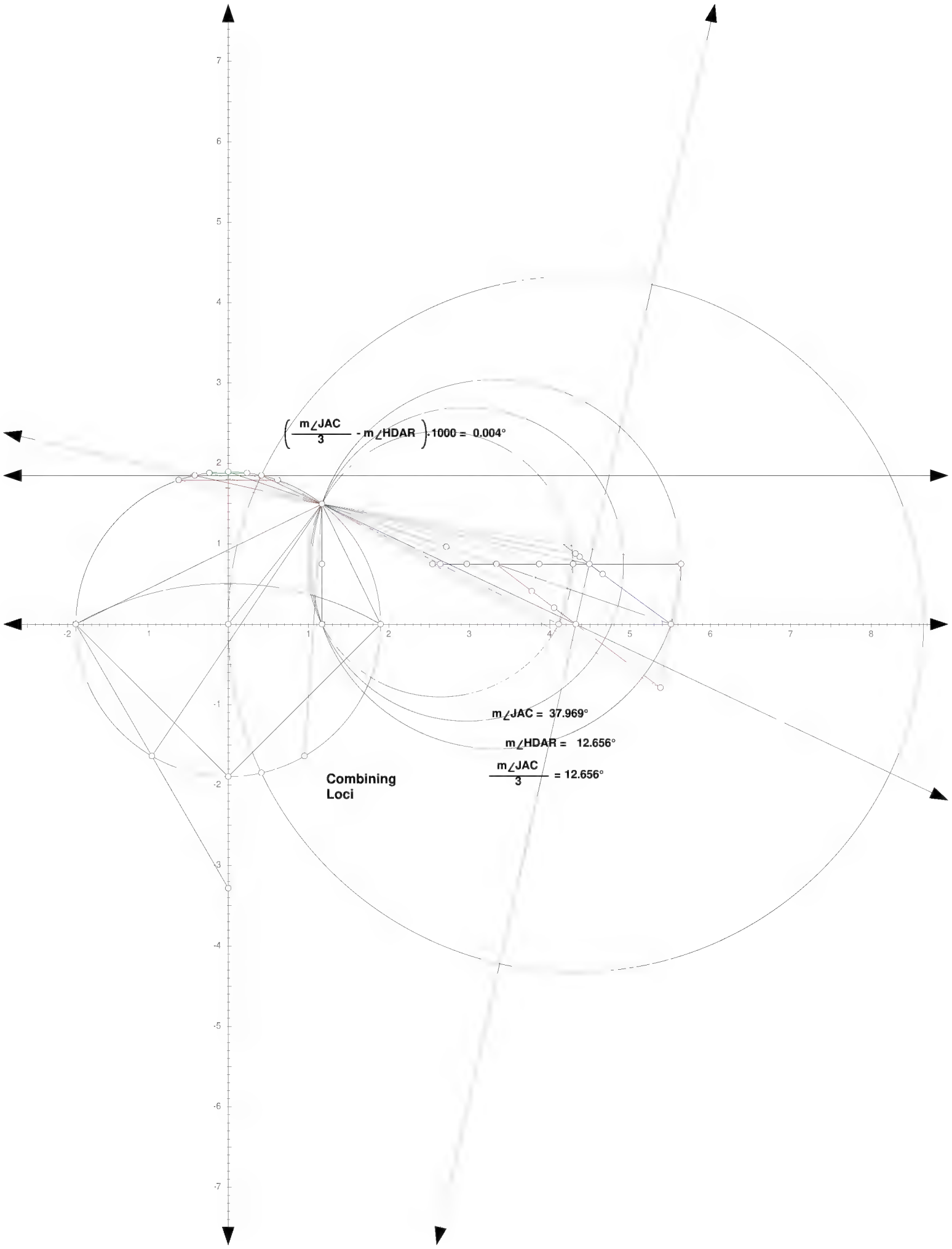

m∠JAC = 56.913°
m∠JAC / 3 = 18.971°
m∠CJAC = 18.971°
m∠JCMCL = 90.002°
(m∠JEA / 3 - m∠CPECO).1000 = 0.030°
(m∠JAC / 3 - m∠CJAC).1000 = 0.304°
m∠CRCPCQ = 59.999°
m∠JEA = 73.457°
m∠CPECO = 24.486°
m∠JEA / 3 = 24.486°


m∠JAC = 57.300°
m∠JAC / 3 = 19.100°
m∠CJAC = 19.100°
m∠DBAC = 19.100°
(m∠JAC / 3 - m∠DBAC).1000 = -0.004°
m∠CZCXCY = 60.000°
(m∠JEA / 3 - m∠CXEA).1000 = 0.012°
m∠JEA = 73.650°
m∠CXEA = 24.550°
m∠JEA / 3 = 24.550°


m∠EAJ = 47.000°
m∠JAC = 43.000°
m∠FIAC = 14.333°
$\left(\frac{m\angle JAC}{3} - m\angle FIAC\right)\cdot 1000 = -0.008°$
$\frac{m\angle JAC}{3} = 14.333°$
m∠FHAC = 14.333°
$\left(\frac{m\angle JAC}{3} - m\angle FHAC\right)\cdot 1000 = -0.030°$


m∠EAJ = 30.000°
→ Move J->GU
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠GIAC = 20.000°
(m∠JAC / 3 - m∠GIAC)·1000 = 0.286°
m∠GSGPGT = 59.996°


m∠JAC = 44.564°
$\left(\frac{m\angle JAC}{3} - m\angle GUAR\right) \cdot 1000 = -0.002°$
$\frac{m\angle JAC}{3} = 14.855°$
m∠GUAR = 14.855°
AYBL = 0.688 inches


$\left(\frac{m\angle JAC}{3} - m\angle HDAR\right) \cdot 1000 = 0.004°$
$m\angle JAC = 37.969°$
$m\angle HDAR = 12.656°$
$\frac{m\angle JAC}{3} = 12.656°$
Combining Loci

$m\angle UCE = 11.601°$

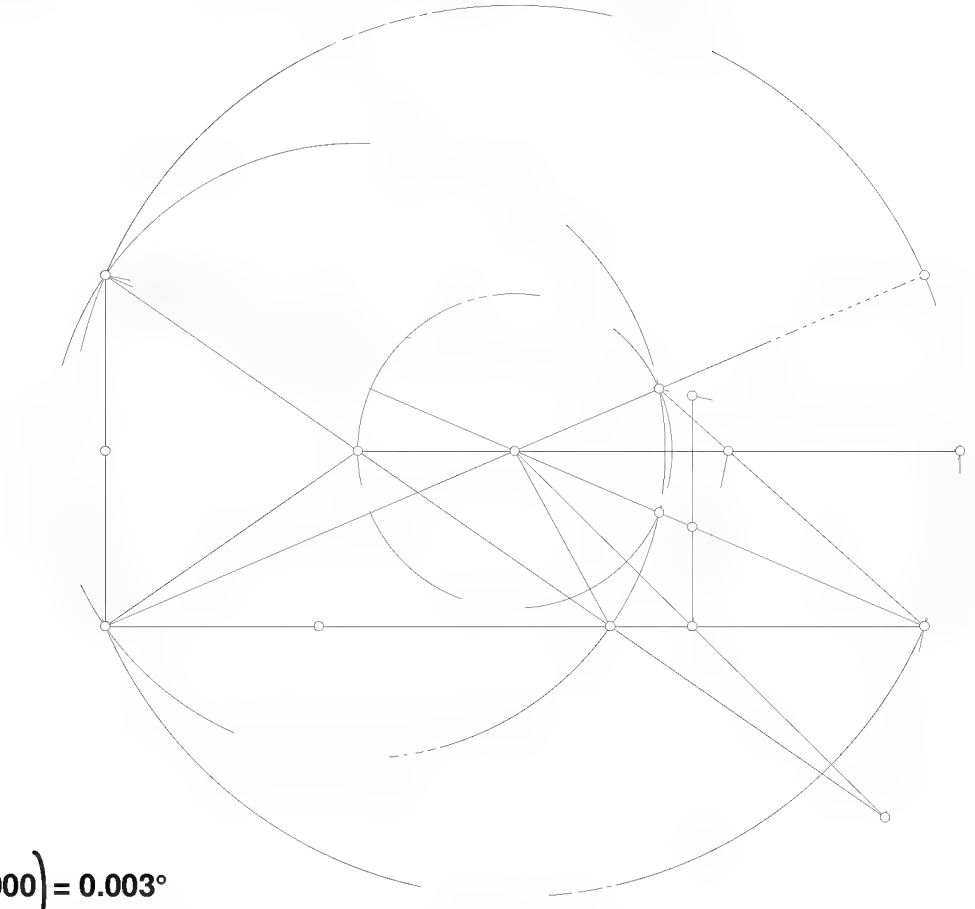
Since the trisection is perfect, one can examine the program limitations.

$$\frac{m\angle DUC}{3} = 11.601°$$

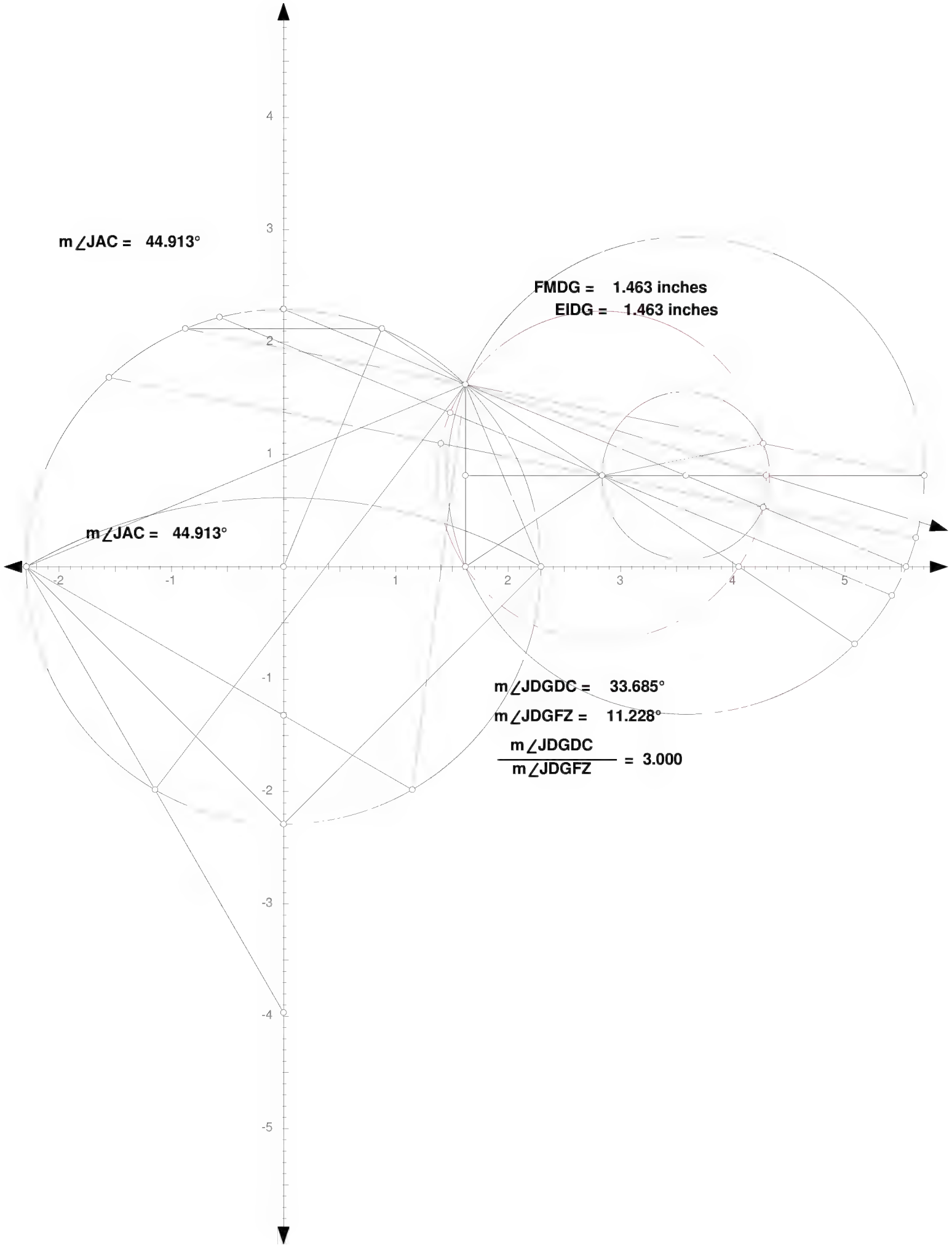
$m\angle ATAMAS = 11.601°$

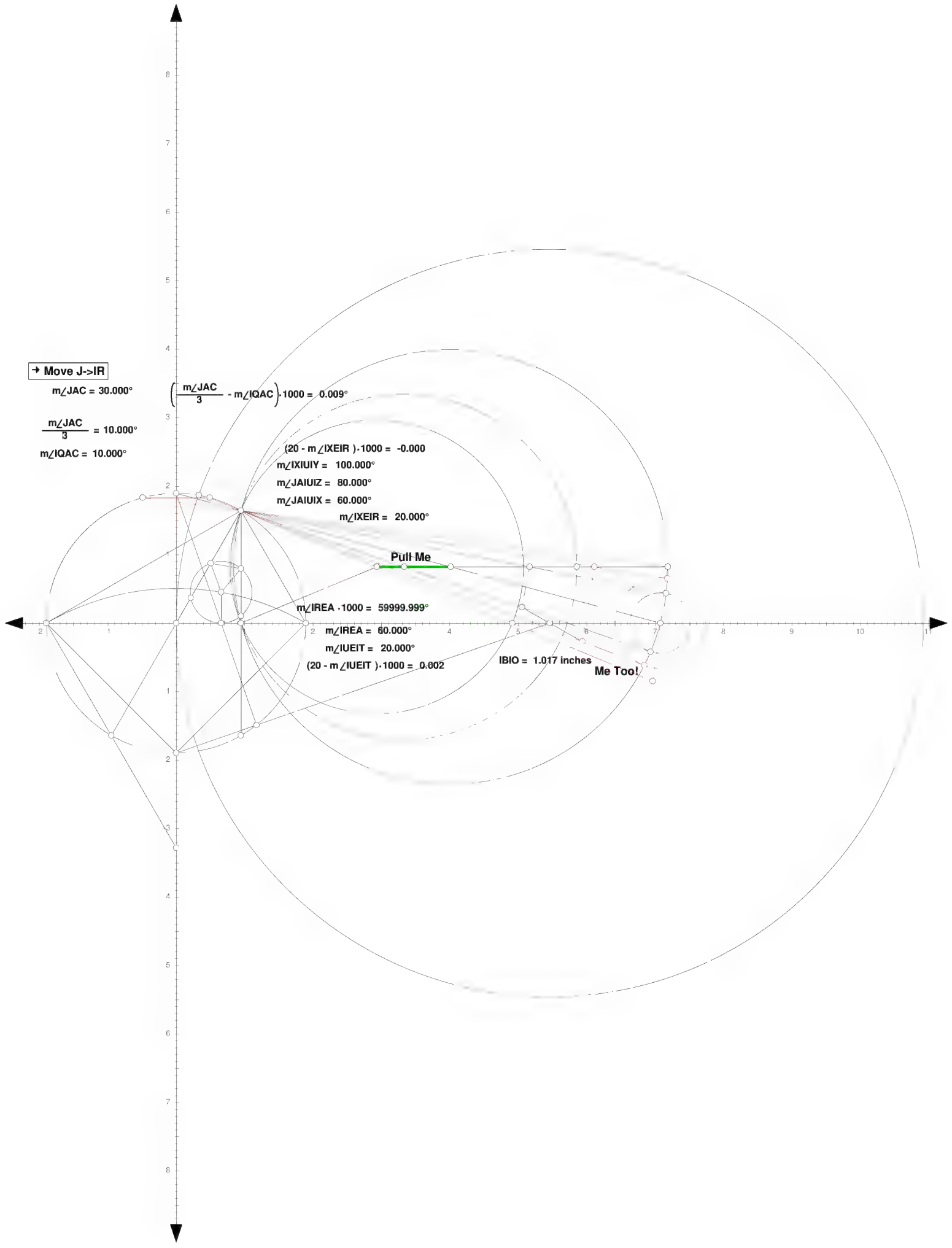
$m\angle DUC = 34.802°$

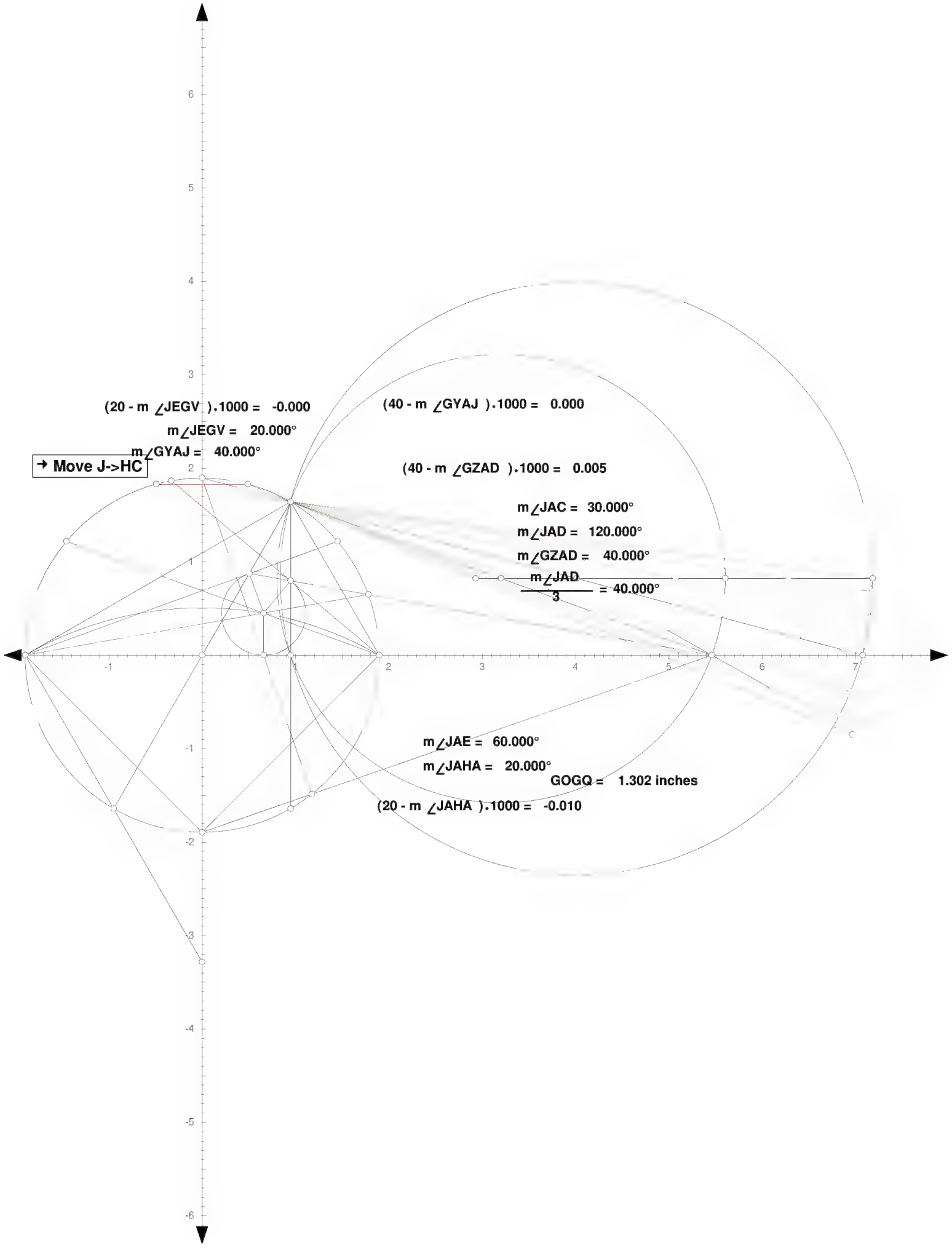
$$\frac{m\angle DUC}{m\angle ATAMAS} = 3.000$$

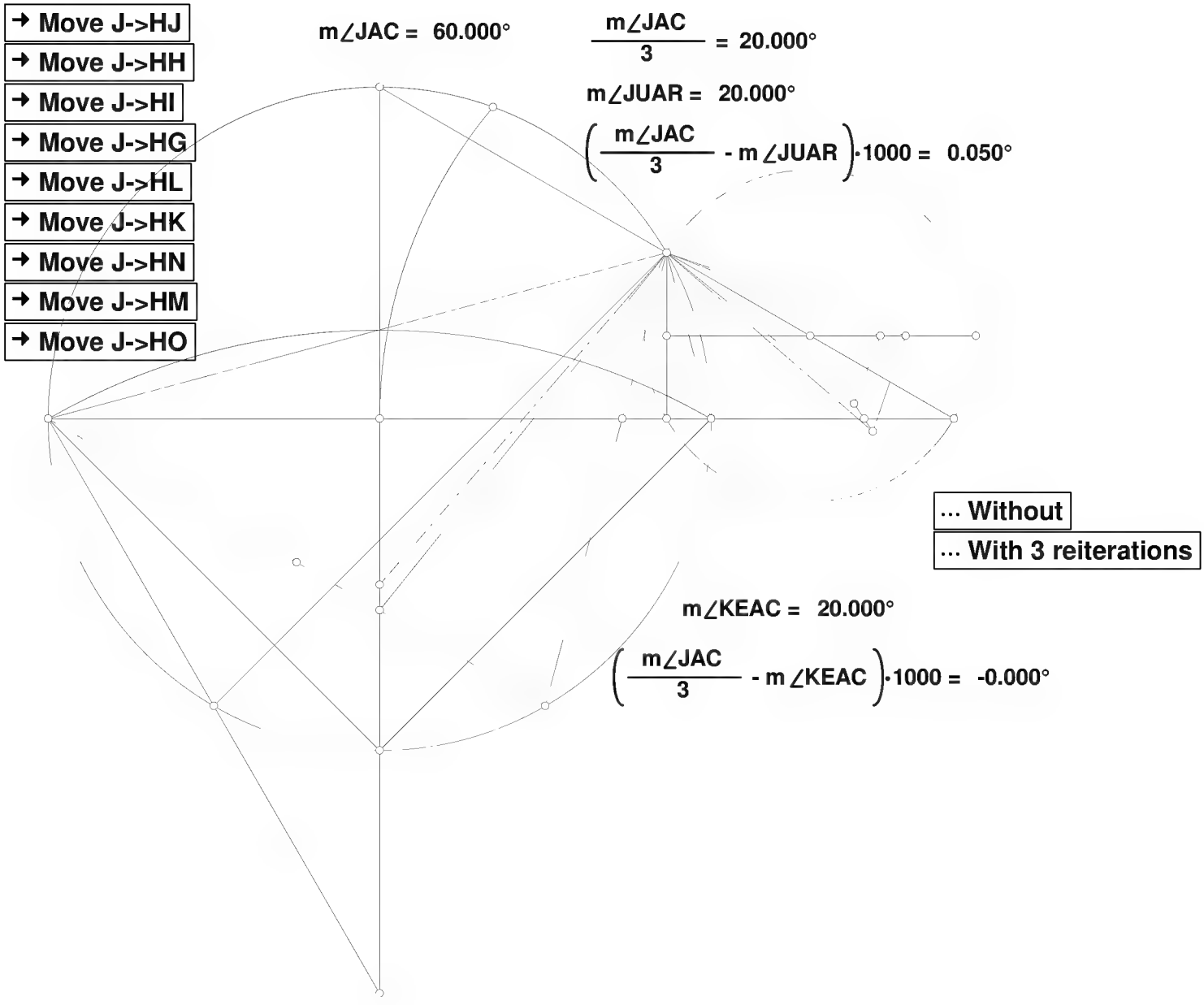


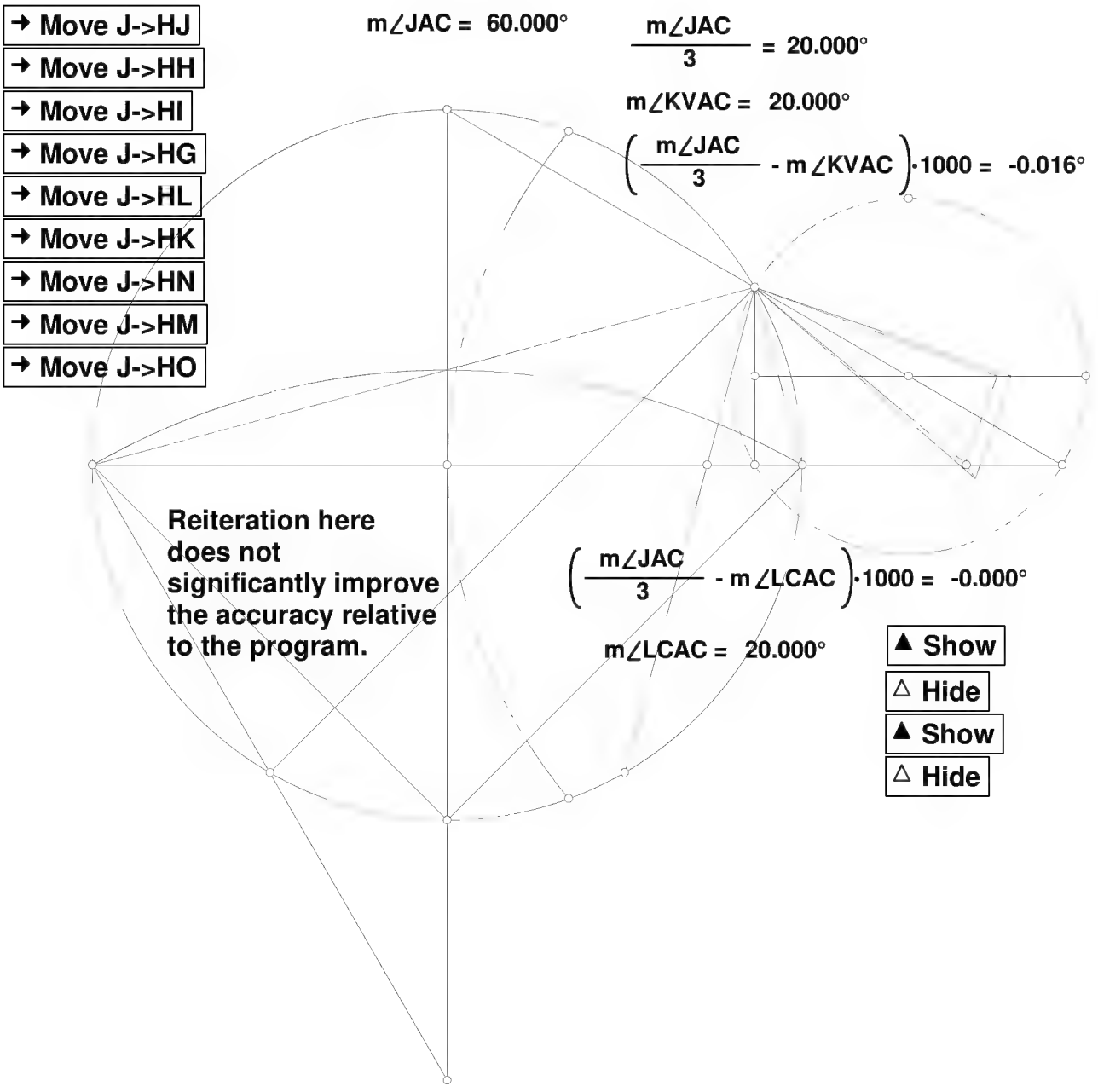
$$\left(\left(\frac{m\angle DUC}{3} - m\angle ATAMAS\right) \cdot 1000\right) = 0.003°$$


m∠JAC = 44.913°
FMDG = 1.463 inches
EIDG = 1.463 inches
m∠JAC = 44.913°
m∠JDGDC = 33.685°
m∠JDGFZ = 11.228°
m∠JDGDC / m∠JDGFZ = 3.000


Move J->IR
m∠JAC = 30.000°
m∠JAC / 3 = 10.000°
m∠IQAC = 10.000°
(m∠JAC / 3 - m∠IQAC)·1000 = 0.009°
(20 - m∠IXEIR)·1000 = -0.000
m∠IXIUIY = 100.000°
m∠JAIUIZ = 80.000°
m∠JAIUIX = 60.000°
m∠IXEIR = 20.000°
Pull Me
m∠IREA ·1000 = 59999.999°
m∠IREA = 60.000°
m∠IUEIT = 20.000°
(20 - m∠IUEIT)·1000 = 0.002
IBIO = 1.017 inches
Me Too!


(20 - m ∠JEGV).1000 = -0.000
m∠JEGV = 20.000°
m∠GYAJ = 40.000°
Move J->HC
(40 - m ∠GYAJ).1000 = 0.000
(40 - m ∠GZAD).1000 = 0.005
m∠JAC = 30.000°
m∠JAD = 120.000°
m∠GZAD = 40.000°
m∠JAD / 3 = 40.000°
m∠JAE = 60.000°
m∠JAHA = 20.000°
GOGQ = 1.302 inches
(20 - m ∠JAHA).1000 = -0.010


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠JUAR = 20.000°
(m∠JAC / 3 - m∠JUAR)·1000 = 0.050°
··· Without
··· With 3 reiterations
m∠KEAC = 20.000°
(m∠JAC / 3 - m∠KEAC)·1000 = -0.000°

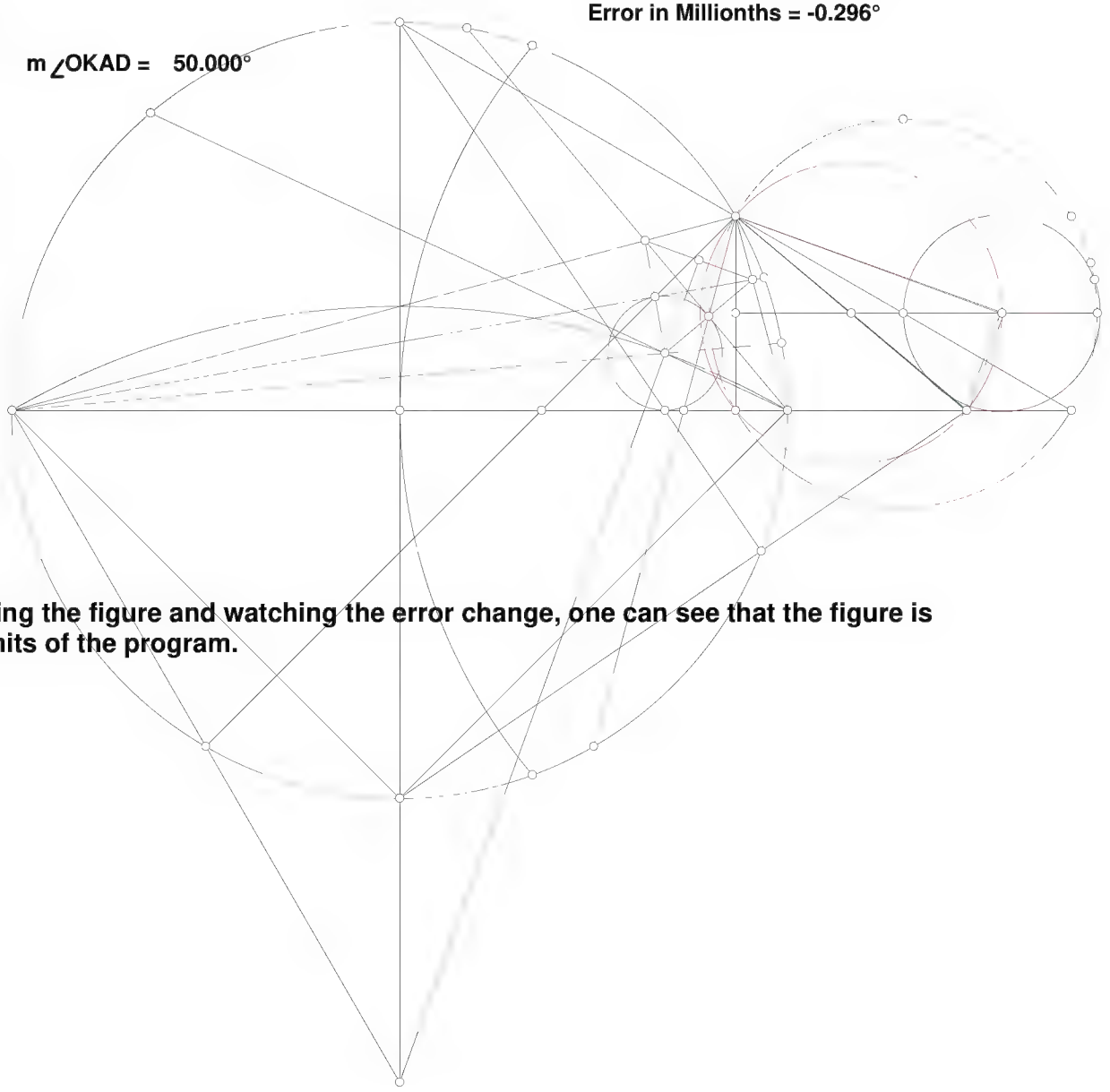

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠KVAC = 20.000°
(m∠JAC / 3 - m∠KVAC)·1000 = -0.016°
Reiteration here does not significantly improve the accuracy relative to the program.
(m∠JAC / 3 - m∠LCAC)·1000 = -0.000°
m∠LCAC = 20.000°
▲ Show
△ Hide
▲ Show
△ Hide

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO

m∠JAC = 60.000° $\frac{m\angle JAC}{3}$ = 20.000° m∠NYAC = 20.000°

Error in Millionths = -0.296°

m∠OKAD = 50.000°



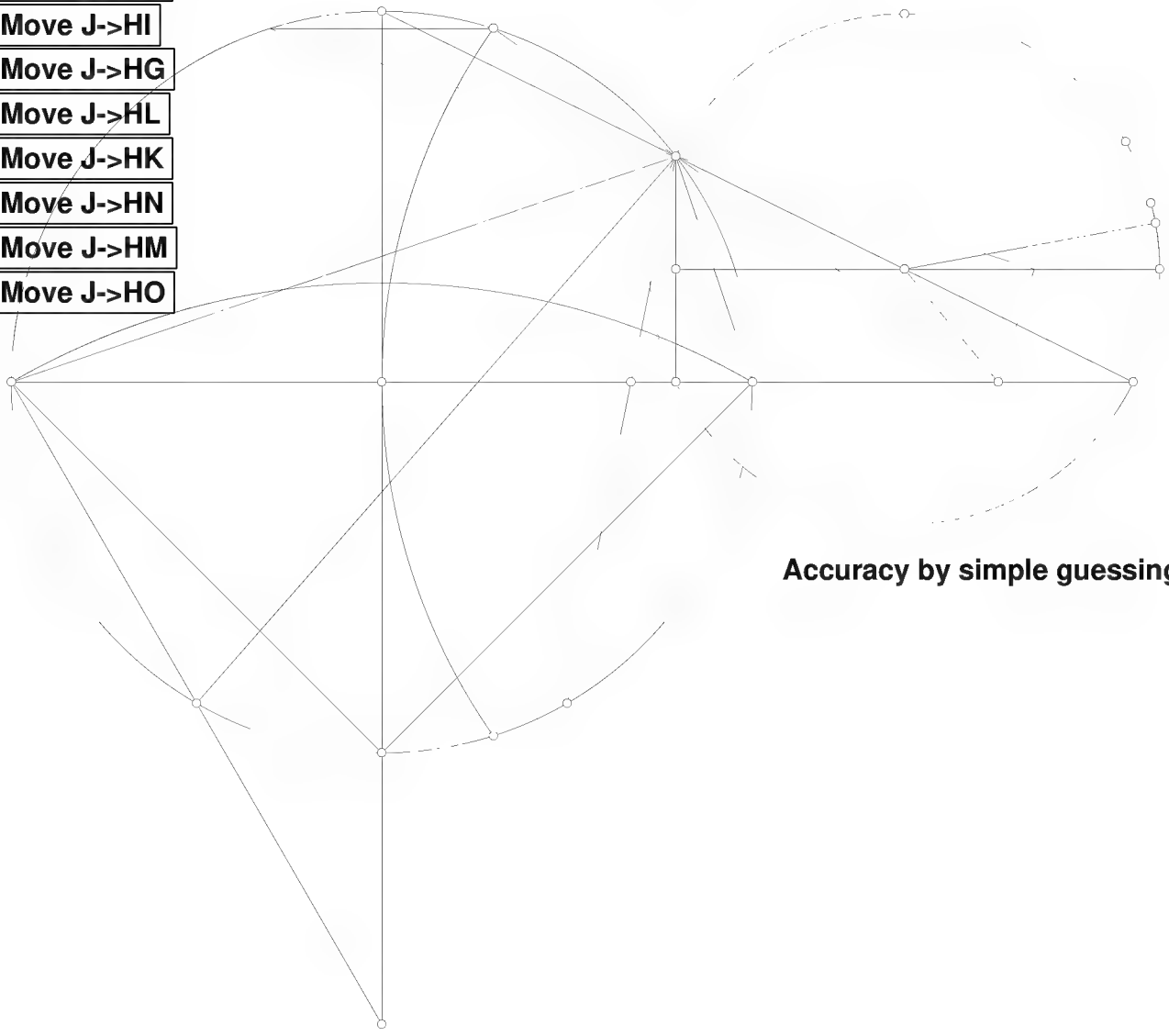
By proportioning the figure and watching the error change, one can see that the figure is beyond the limits of the program.

$m\angle JGAC = 17.500°$

$m\angle JAC = 52.500°$

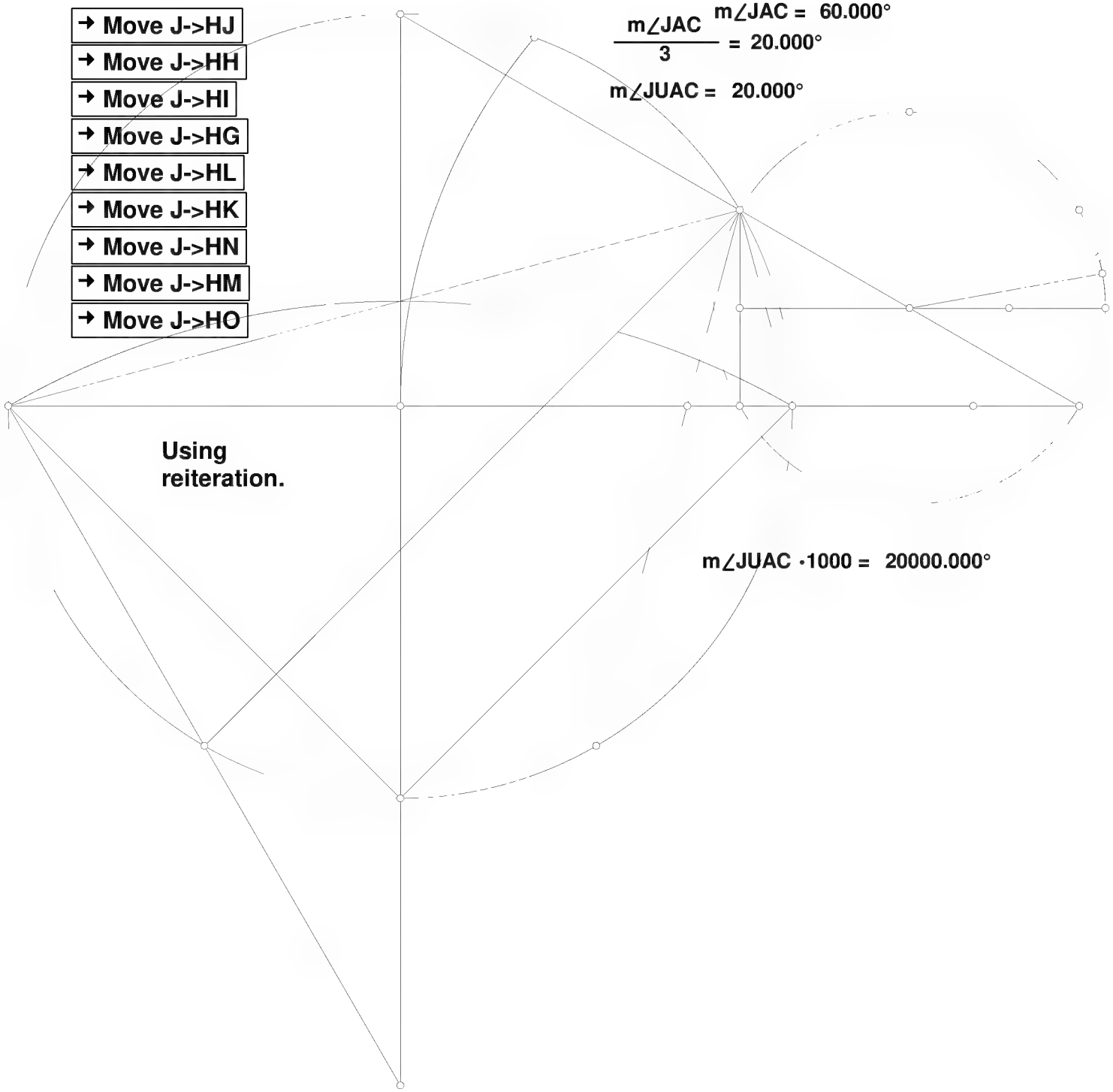
$\frac{m\angle JAC}{3} = 17.500°$

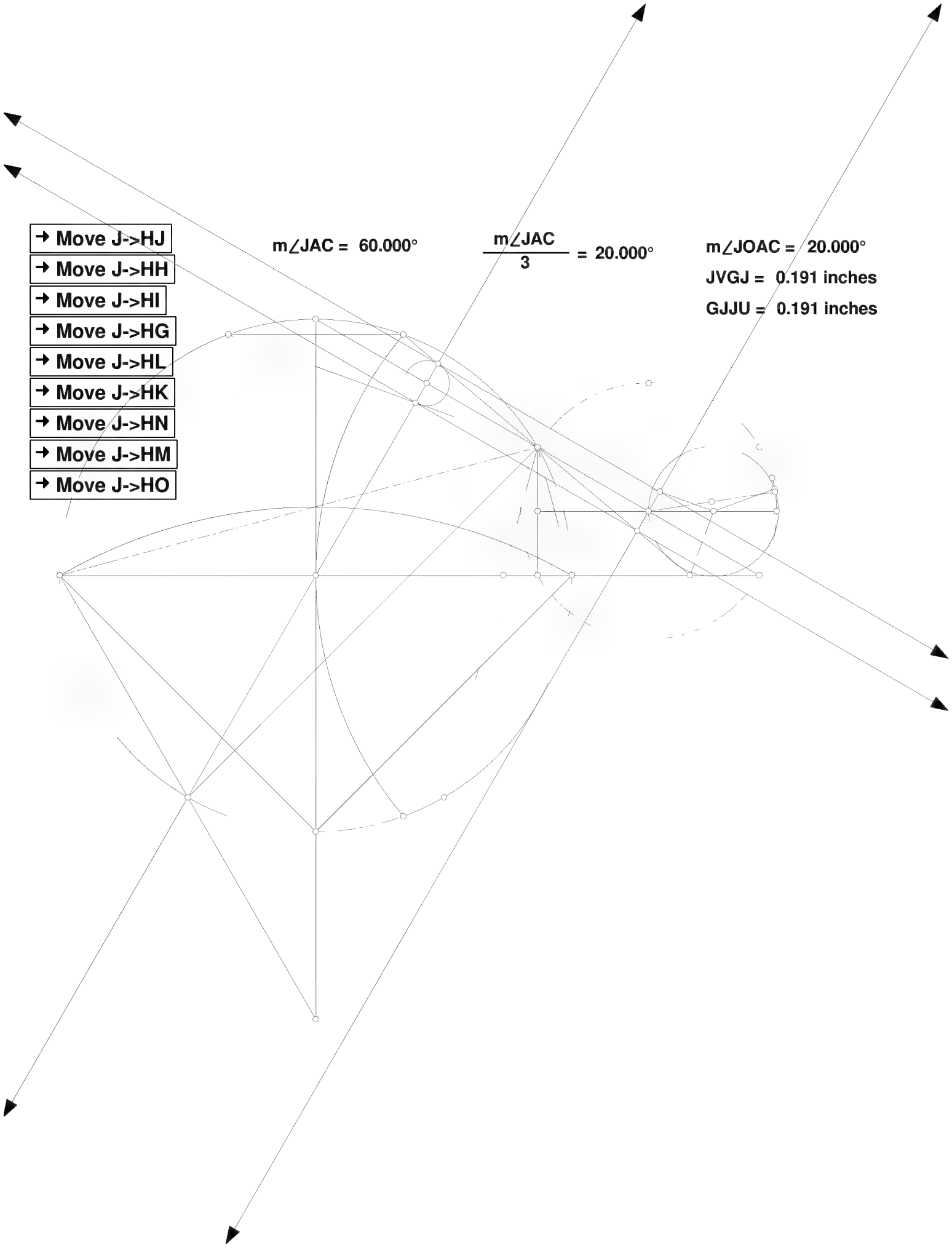
- → Move J->HJ
- → Move J->HH
- → Move J->HI
- → Move J->HG
- → Move J->HL
- → Move J->HK
- → Move J->HN
- → Move J->HM
- → Move J->HO



Guess Me

Accuracy by simple guessing.


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠JUAC = 20.000°
Using reiteration.
m∠JUAC ·1000 = 20000.000°

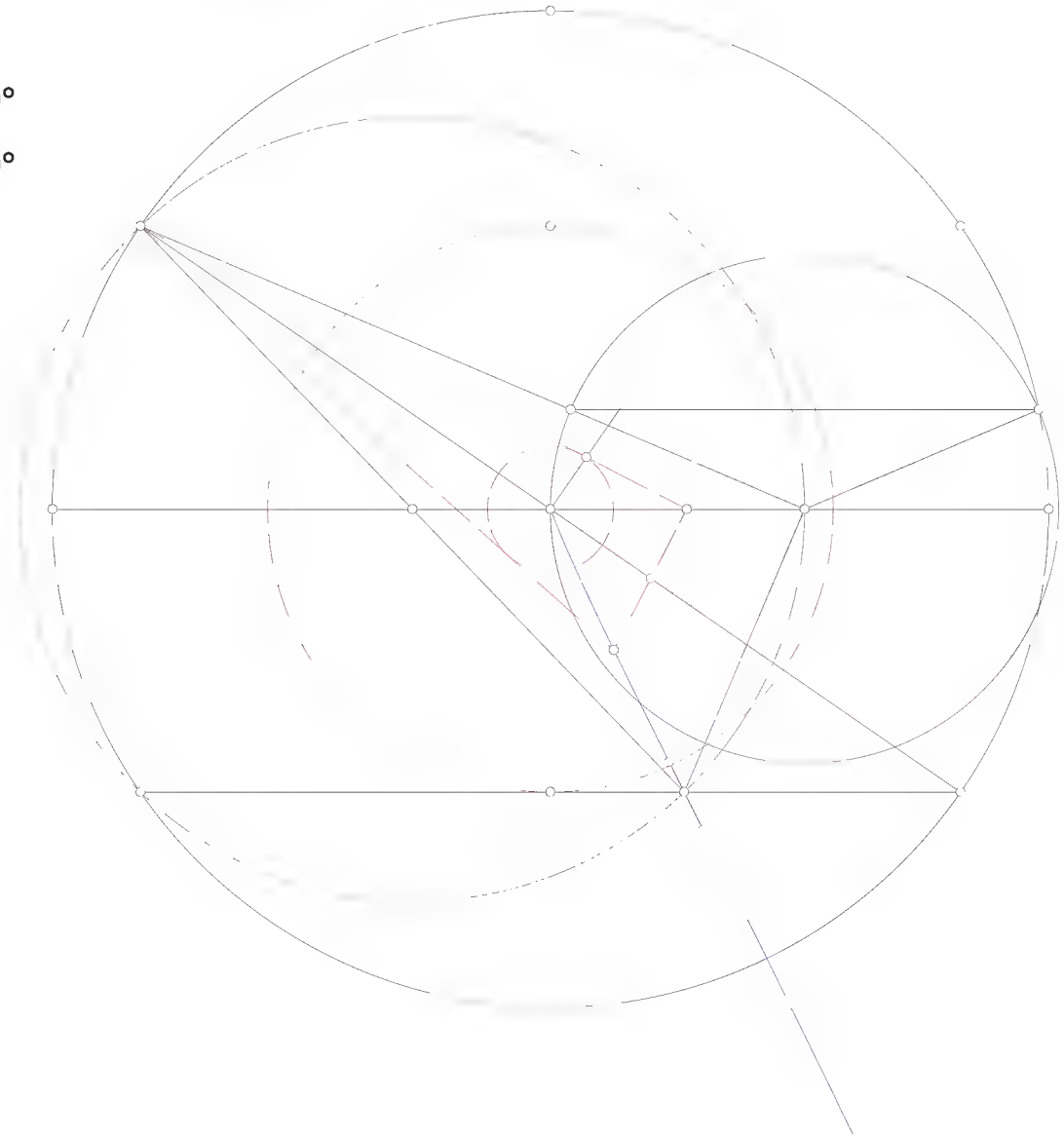

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 60.000°
m∠JAC / 3 = 20.000°
m∠JOAC = 20.000°
JVGJ = 0.191 inches
GJJU = 0.191 inches

$$\frac{m\angle HAG}{m\angle AGHAC} = 3.000$$

$m\angle HAG = 69.181°$

$m\angle HAGAC = 90.000°$

$m\angle AGHAC = 23.060°$

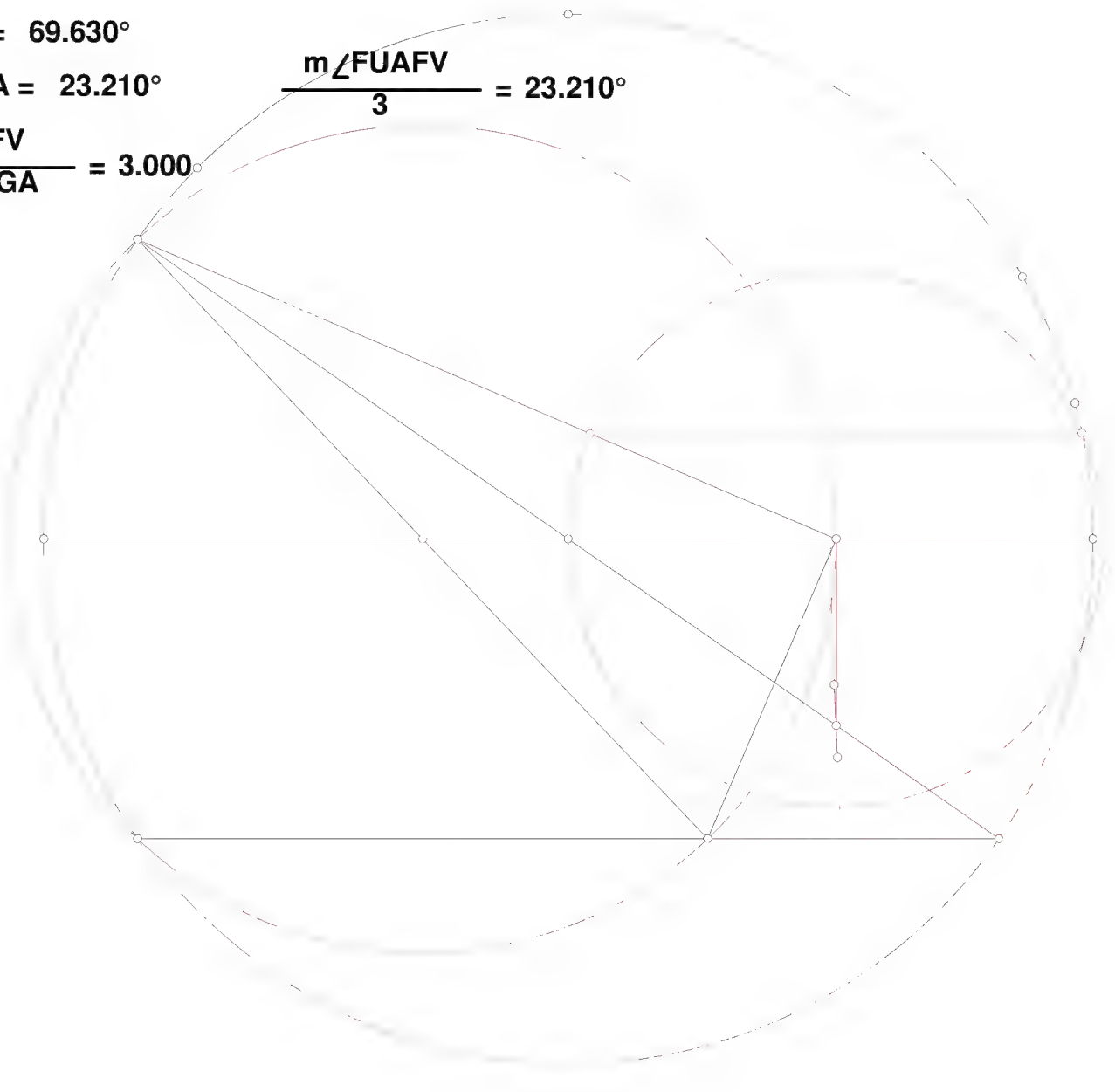


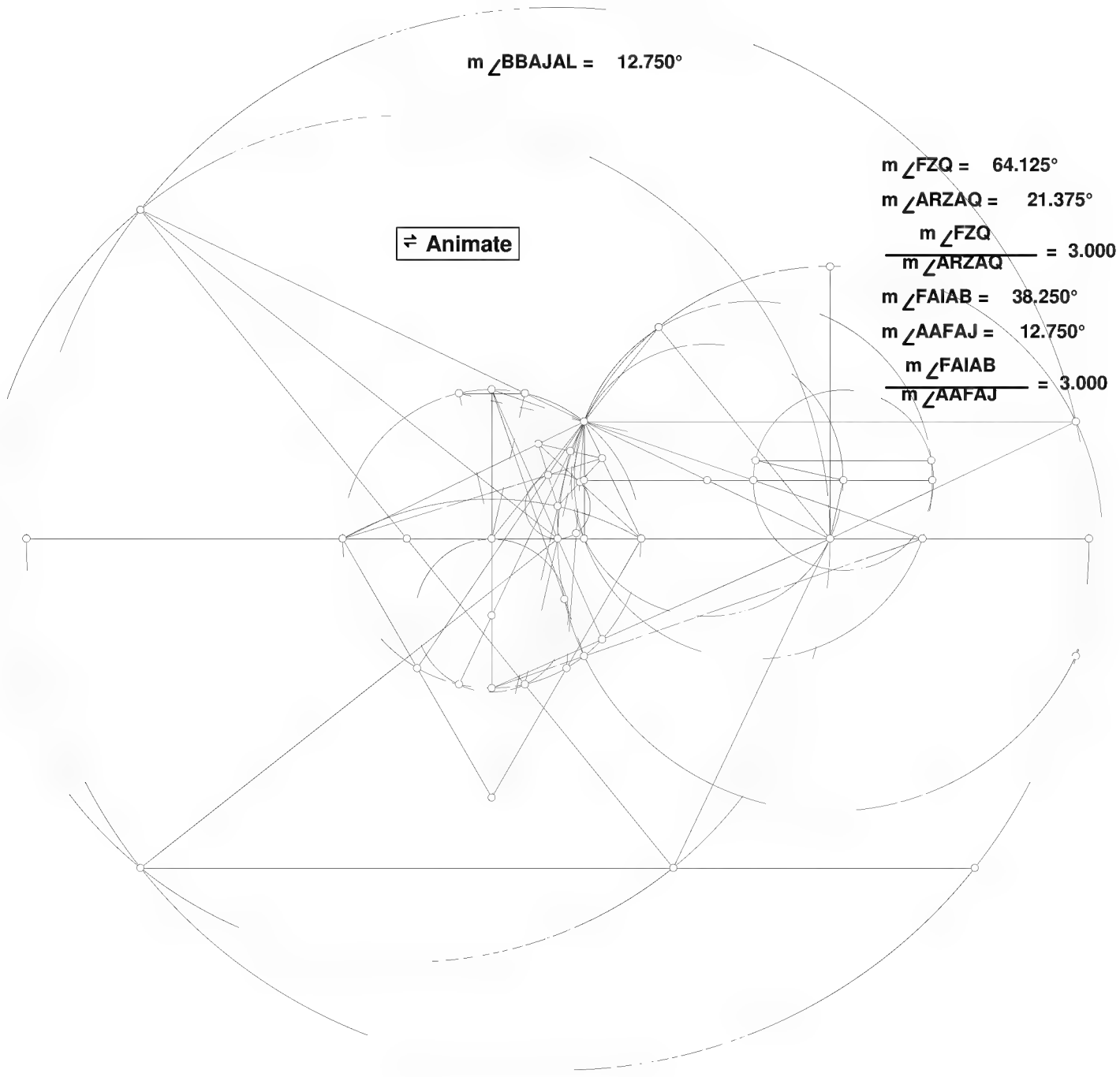
$m\angle FUAFV = 69.630°$

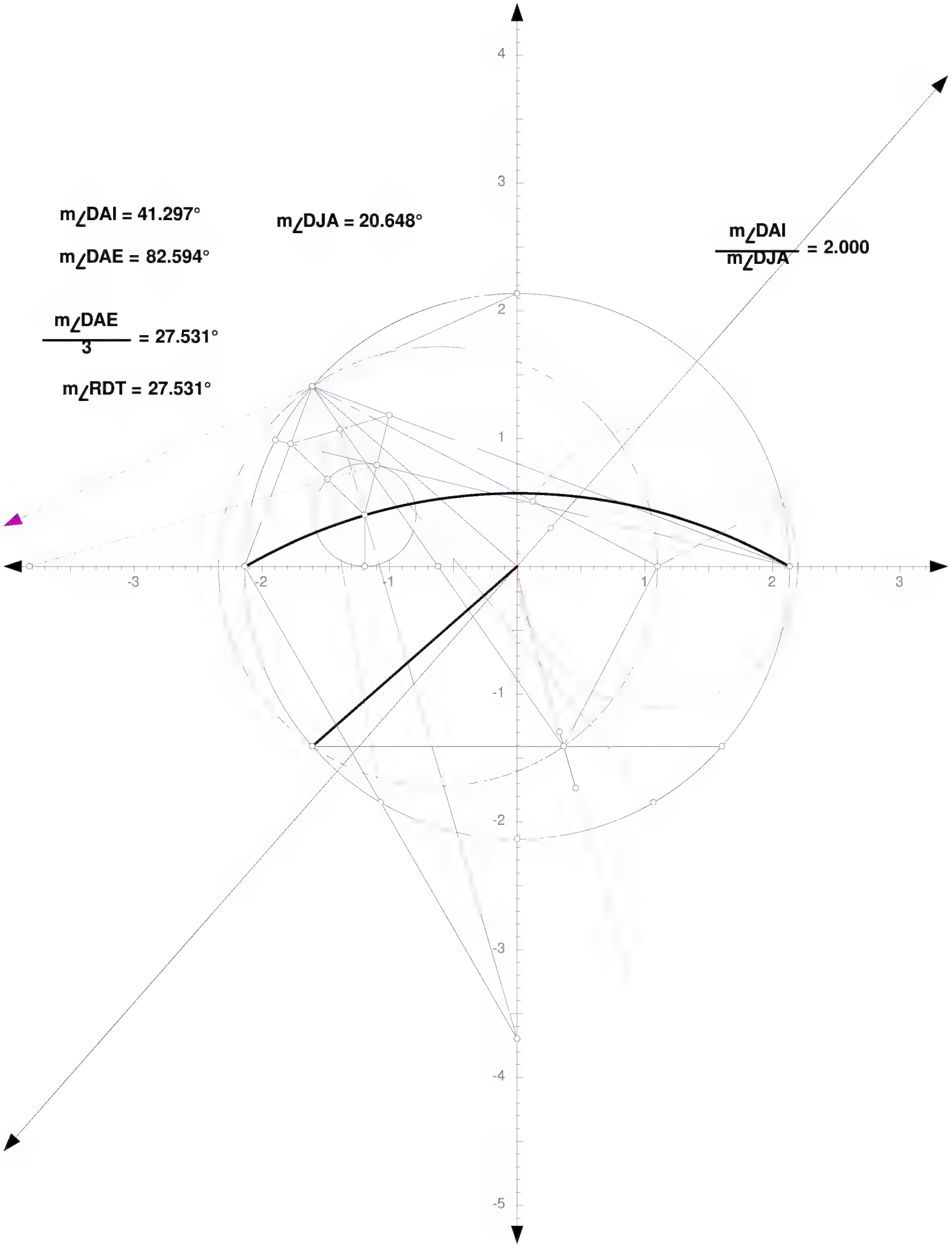
$m\angle GBFUGA = 23.210°$

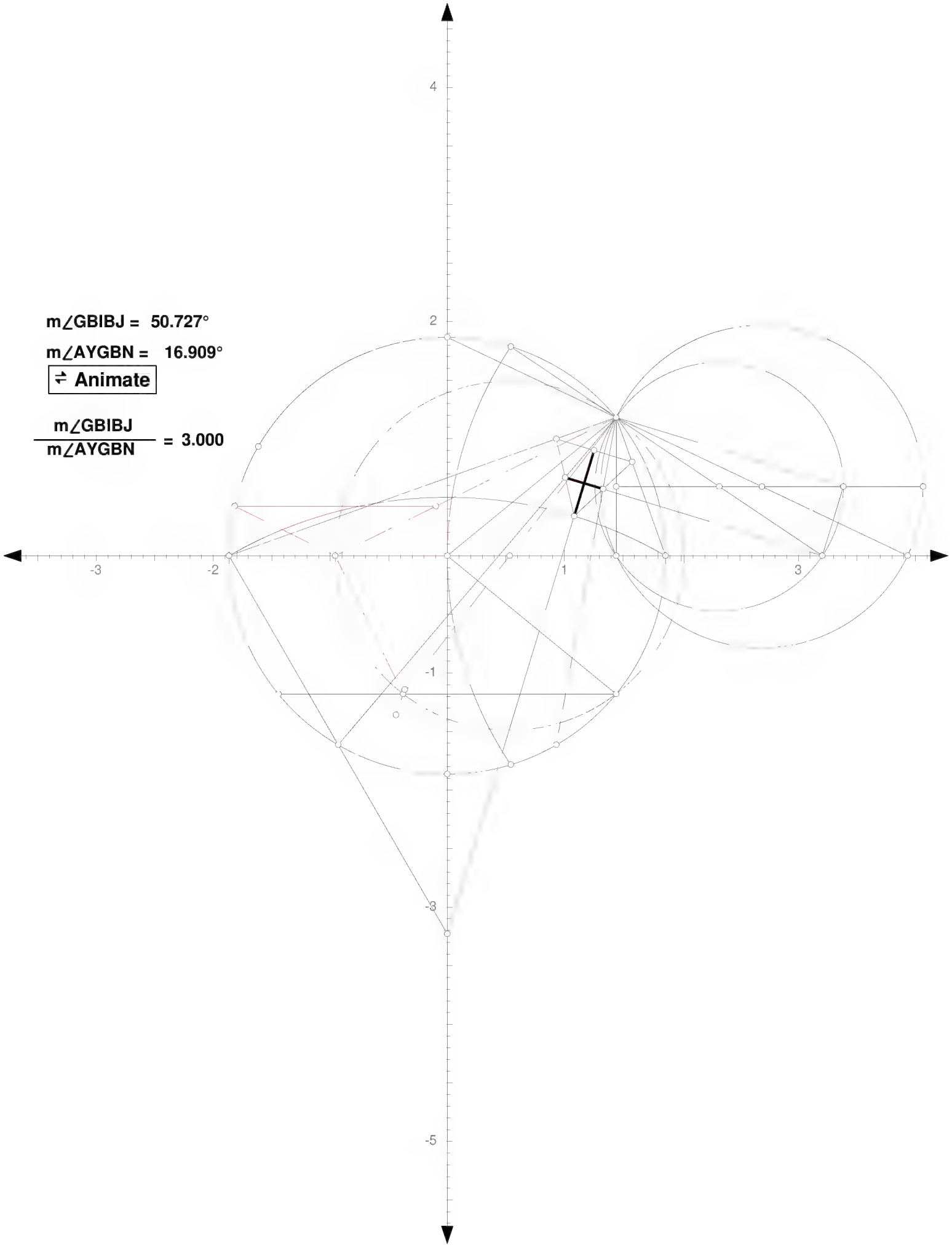
$$\frac{m\angle FUAFV}{m\angle GBFUGA} = 3.000$$

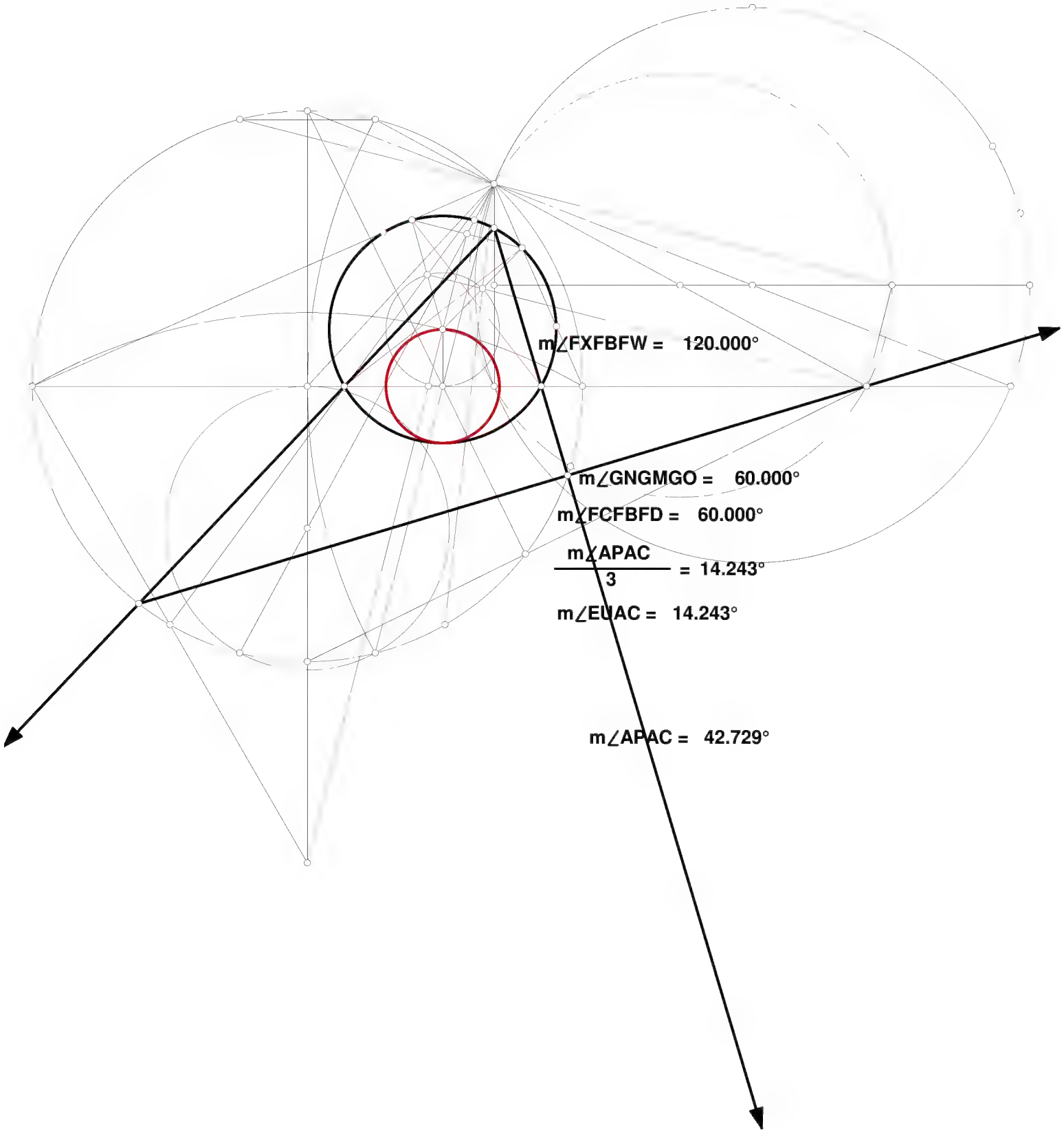
$$\frac{m\angle FUAFV}{3} = 23.210°$$

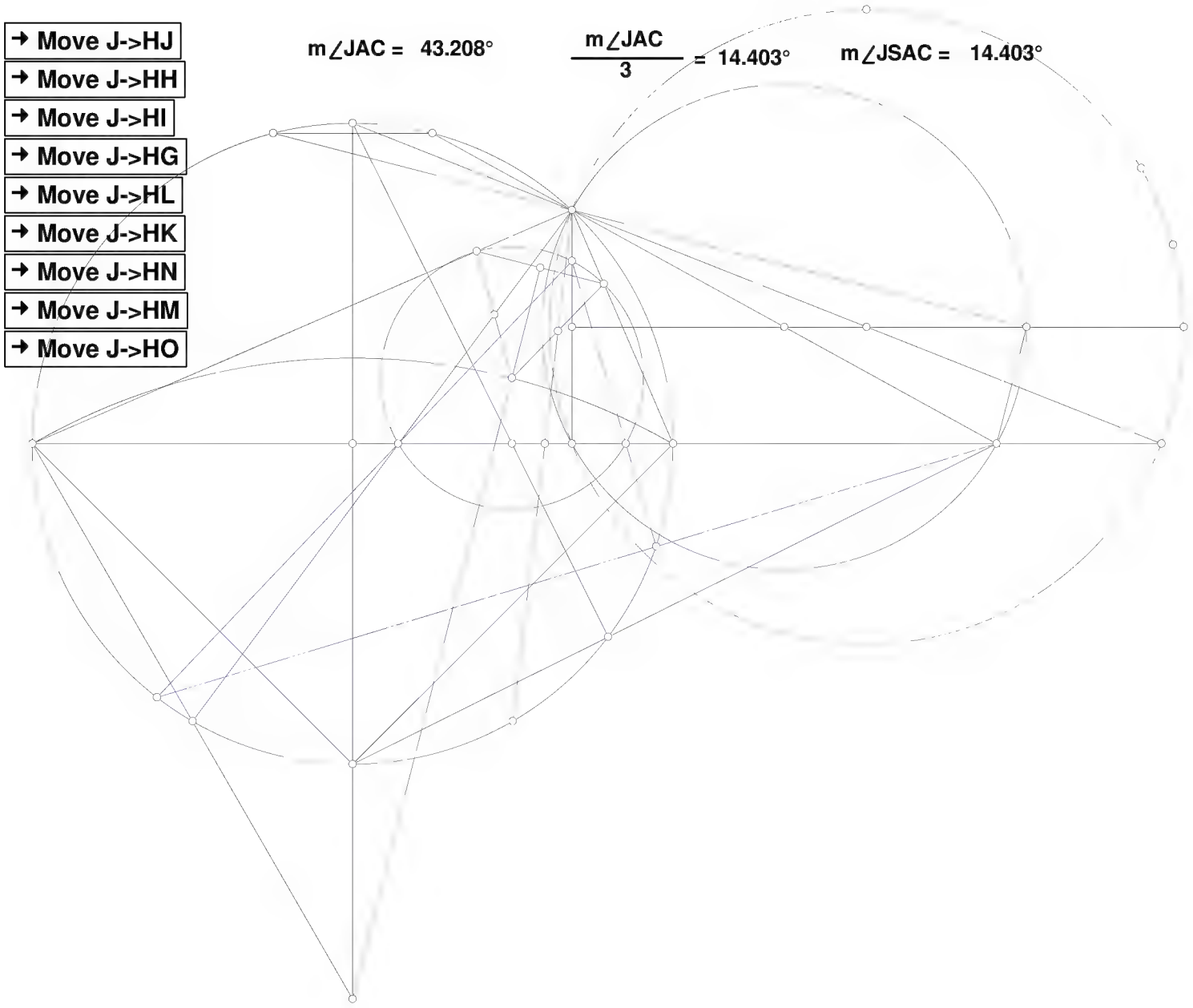


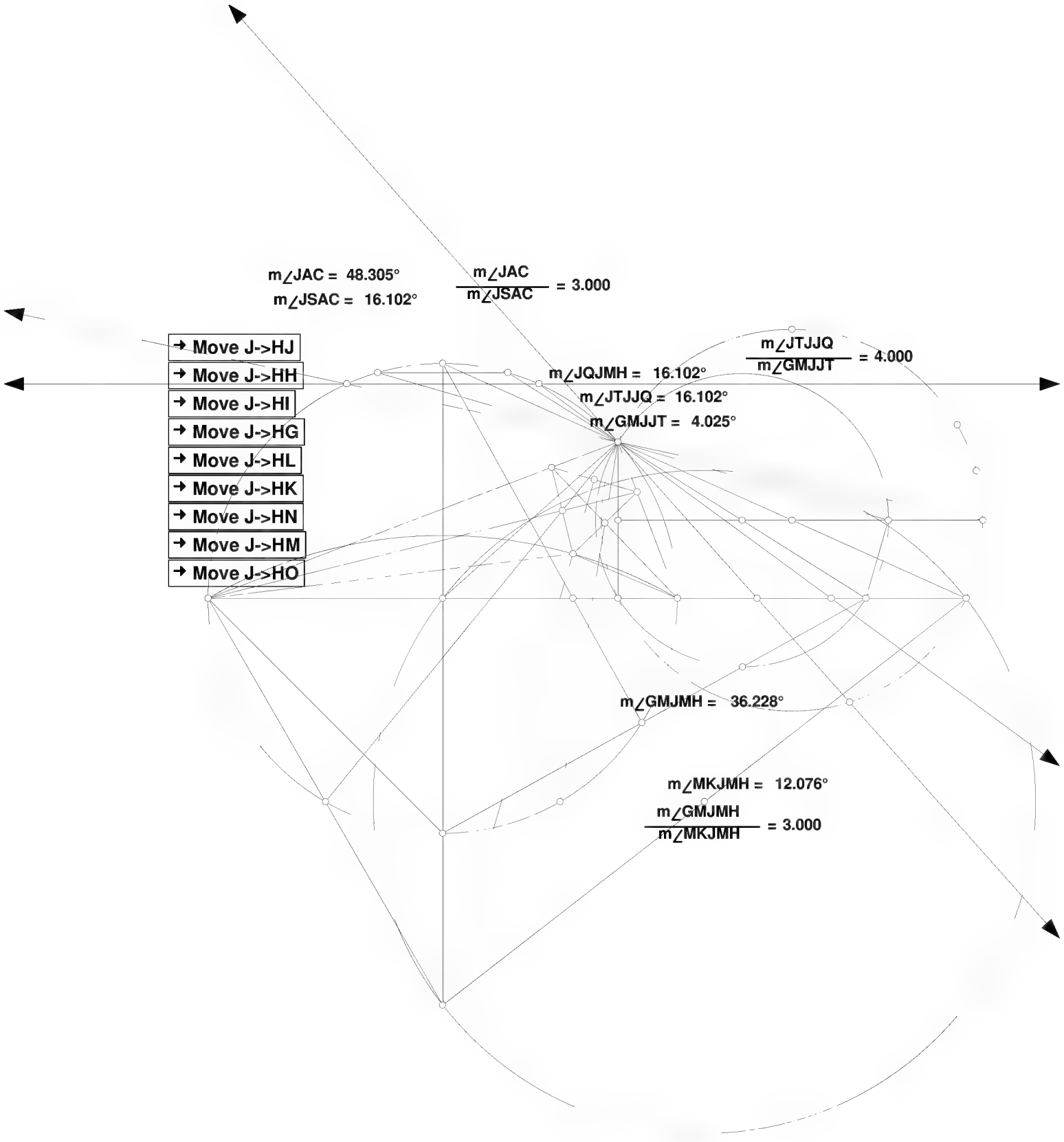

m ∠BBAJAL = 12.750°
⇌ Animate
m ∠FZQ = 64.125°
m ∠ARZAQ = 21.375°
m ∠FZQ / m ∠ARZAQ = 3.000
m ∠FAIAB = 38.250°
m ∠AAFAJ = 12.750°
m ∠FAIAB / m ∠AAFAJ = 3.000


m∠DAI = 41.297°
m∠DJA = 20.648°
m∠DAI / m∠DJA = 2.000
m∠DAE = 82.594°
m∠DAE / 3 = 27.531°
m∠RDT = 27.531°
4
3
2
1
-1
-2
-3
-4
-5
-3
-2
-1
1
2
3


m∠GBIBJ = 50.727°
m∠AYGBN = 16.909°
⇄ Animate
m∠GBIBJ / m∠AYGBN = 3.000
4
2
-1
-3
-5
-3
-2
1
3


m∠FXFBFW = 120.000°
m∠GNGMGO = 60.000°
m∠FCFBFD = 60.000°
m∠APAC / 3 = 14.243°
m∠EUAC = 14.243°
m∠APAC = 42.729°


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 43.208°
m∠JAC / 3 = 14.403°
m∠JSAC = 14.403°


m∠JAC = 48.305°
m∠JSAC = 16.102°
m∠JAC / m∠JSAC = 3.000
→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JQJMH = 16.102°
m∠JTJJQ = 16.102°
m∠GMJJT = 4.025°
m∠JTJJQ / m∠GMJJT = 4.000
m∠GMJMH = 36.228°
m∠MKJMH = 12.076°
m∠GMJMH / m∠MKJMH = 3.000

m∠JAC = 47.080°

m∠JSAC = 15.693°

$$\frac{m\angle JAC}{m\angle JSAC} = 3.000$$

m∠JAC = 47.080°

→ Move J->HJ

→ Move J->HH

→ Move J->HI

→ Move J->HG

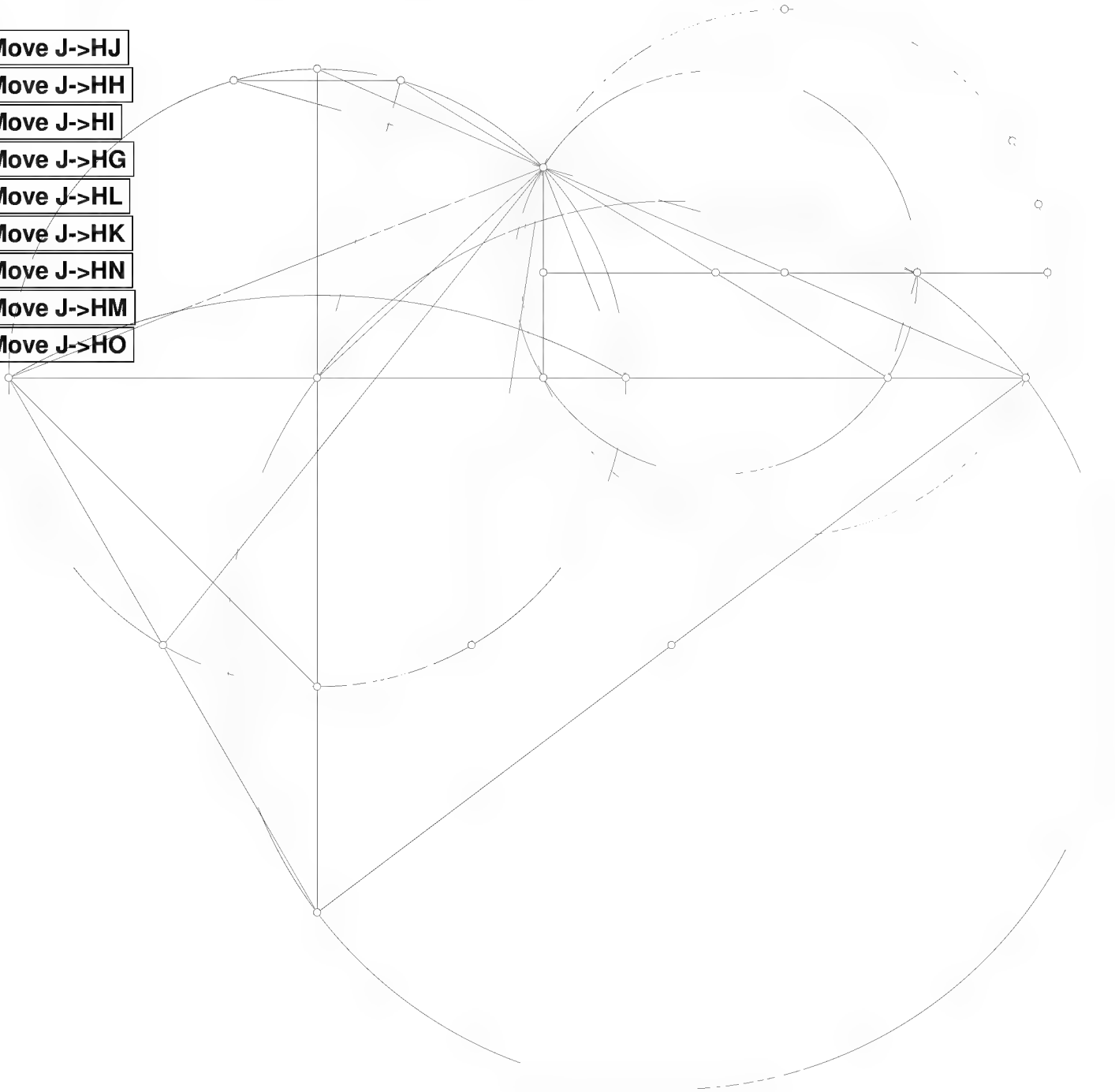
→ Move J->HL

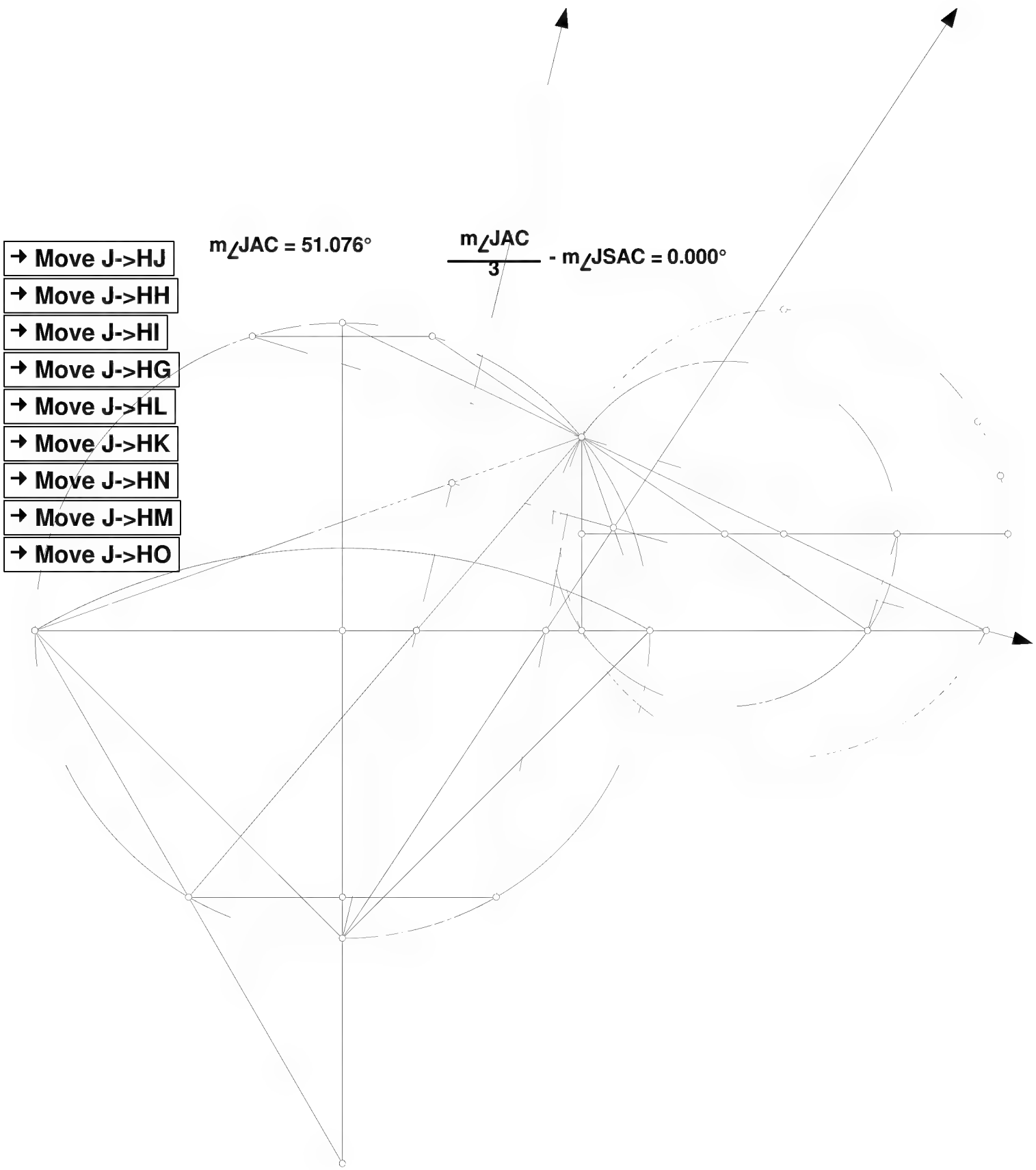
→ Move J->HK

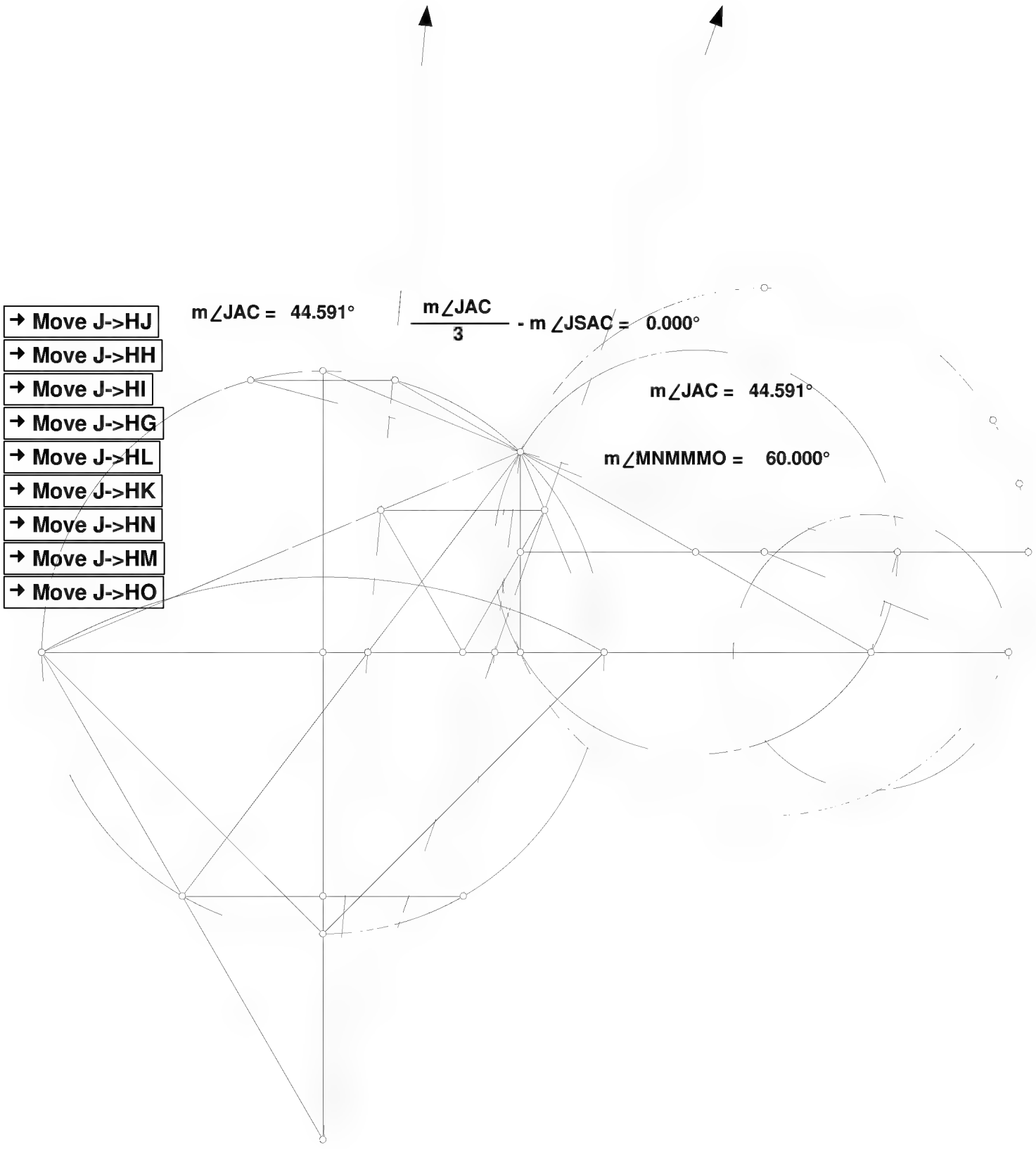
→ Move J->HN

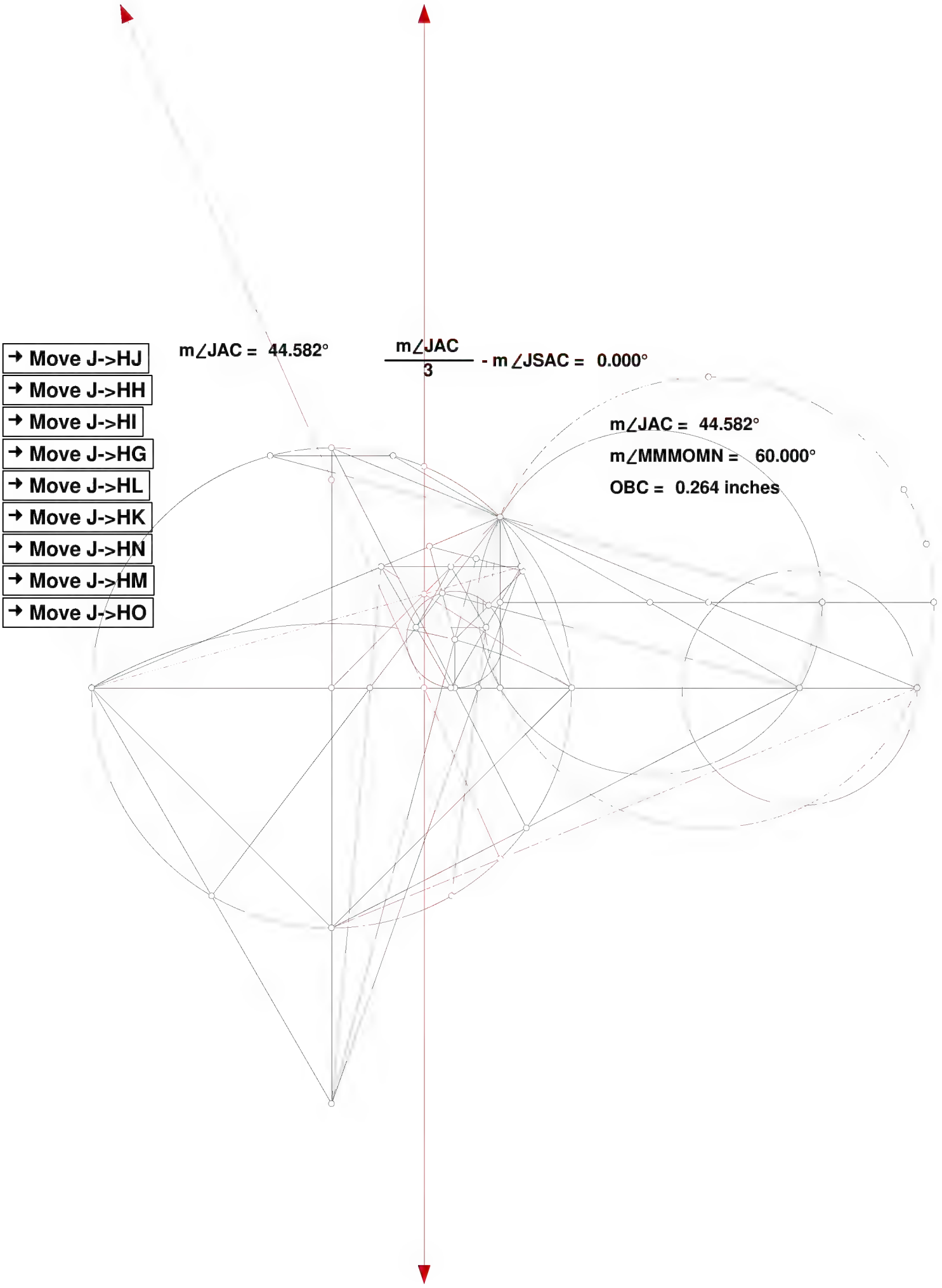
→ Move J->HM

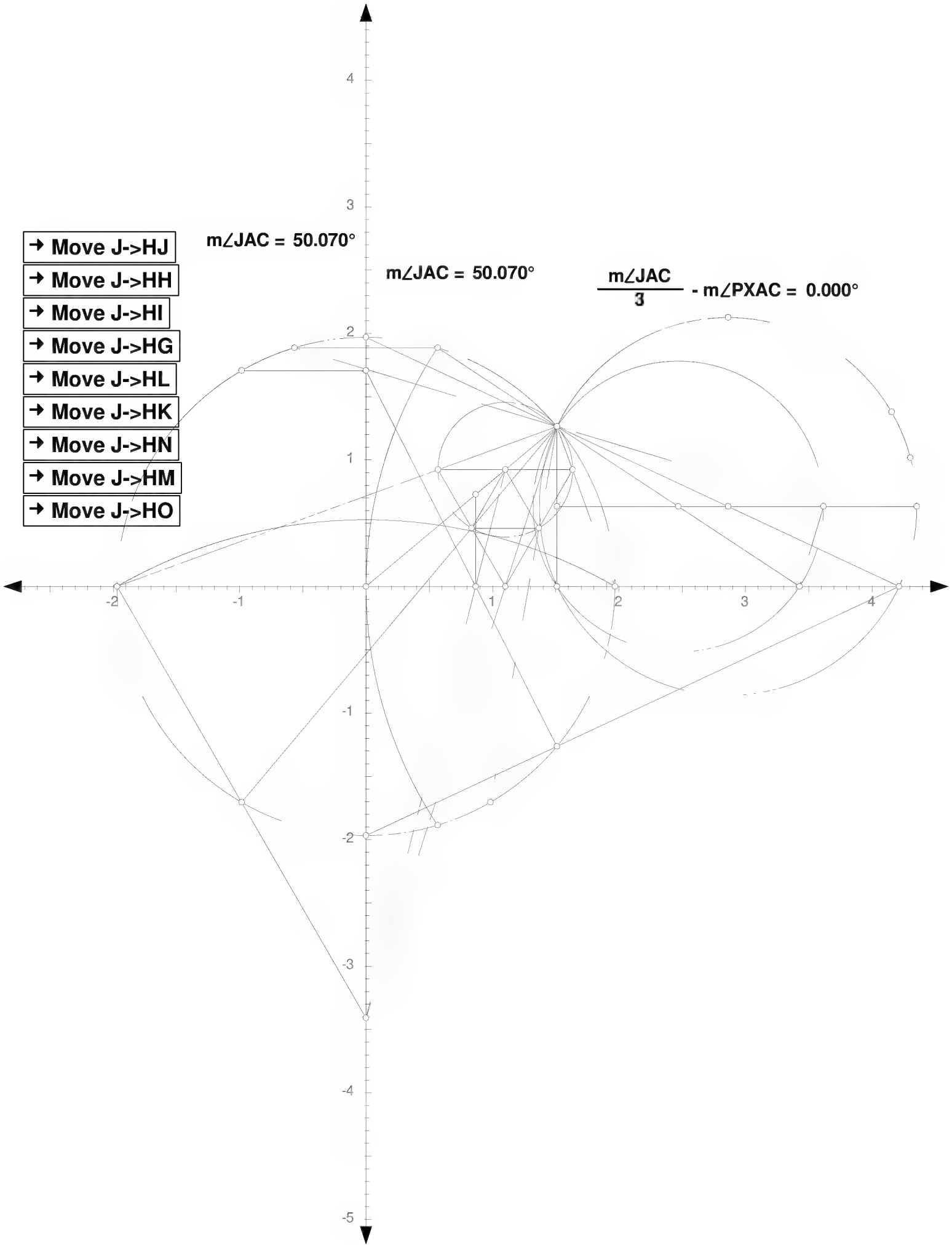
→ Move J->HO

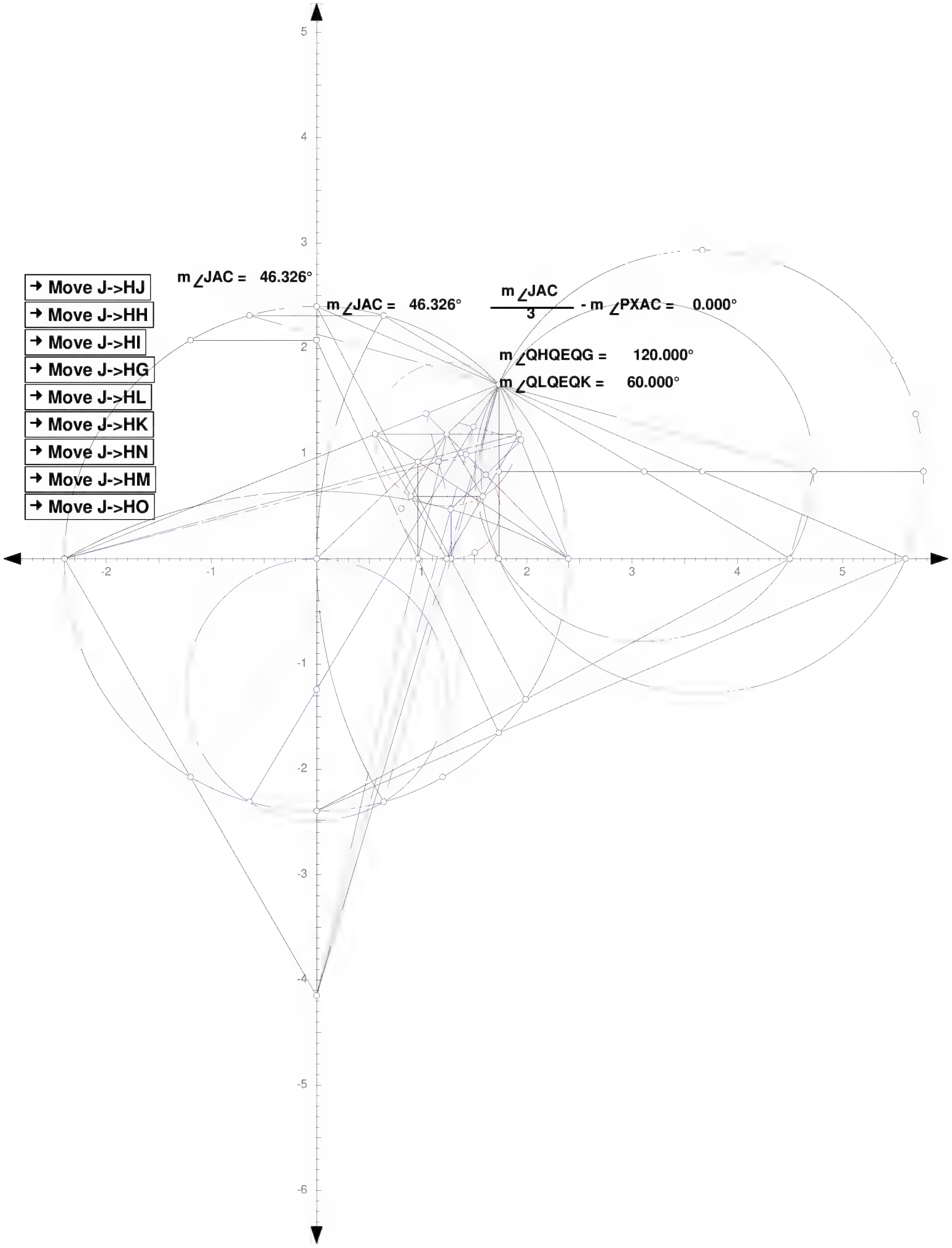


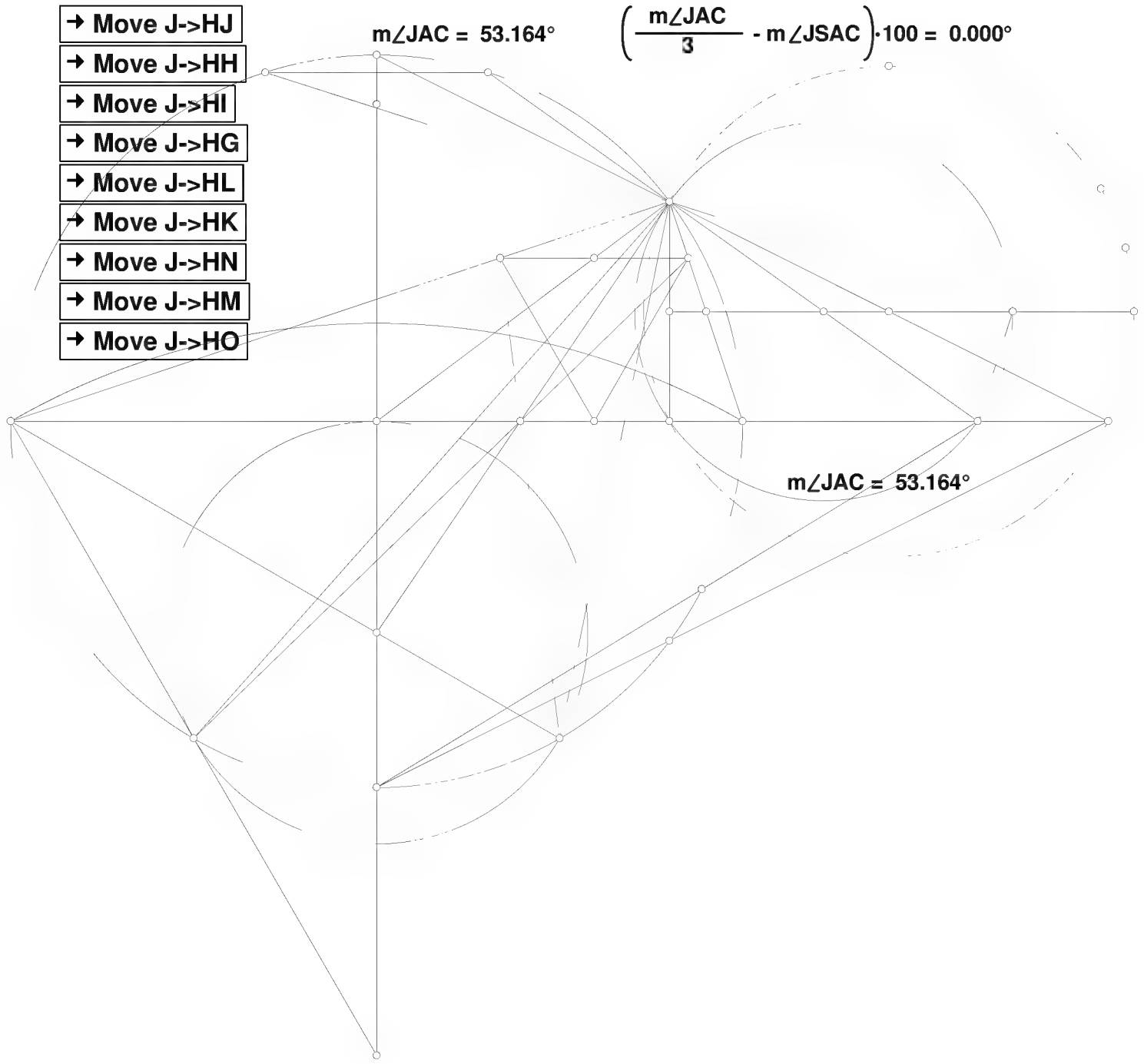

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 51.076°
m∠JAC / 3 - m∠JSAC = 0.000°

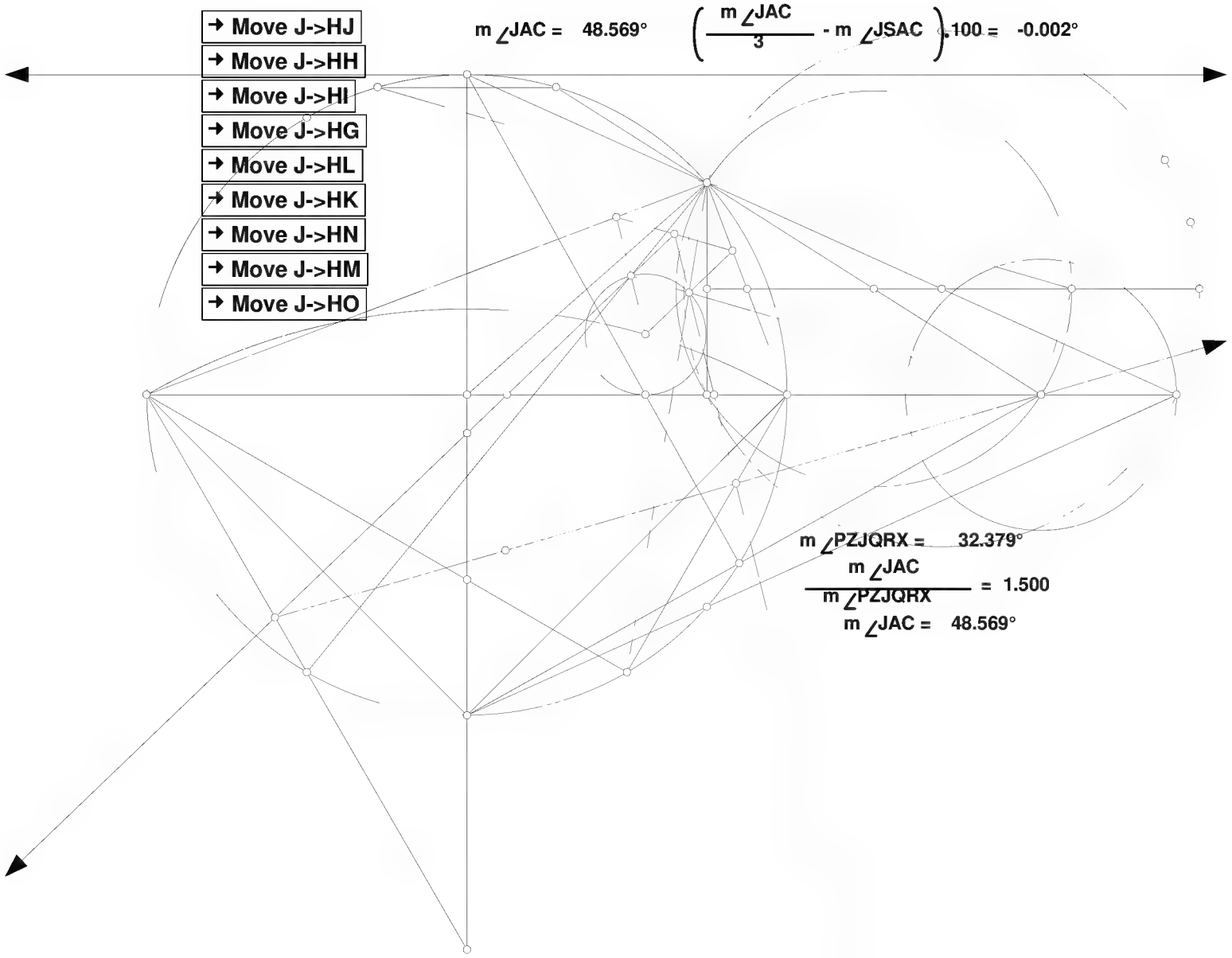

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 44.591°
m∠JAC / 3 - m∠JSAC = 0.000°
m∠JAC = 44.591°
m∠MNMMMO = 60.000°

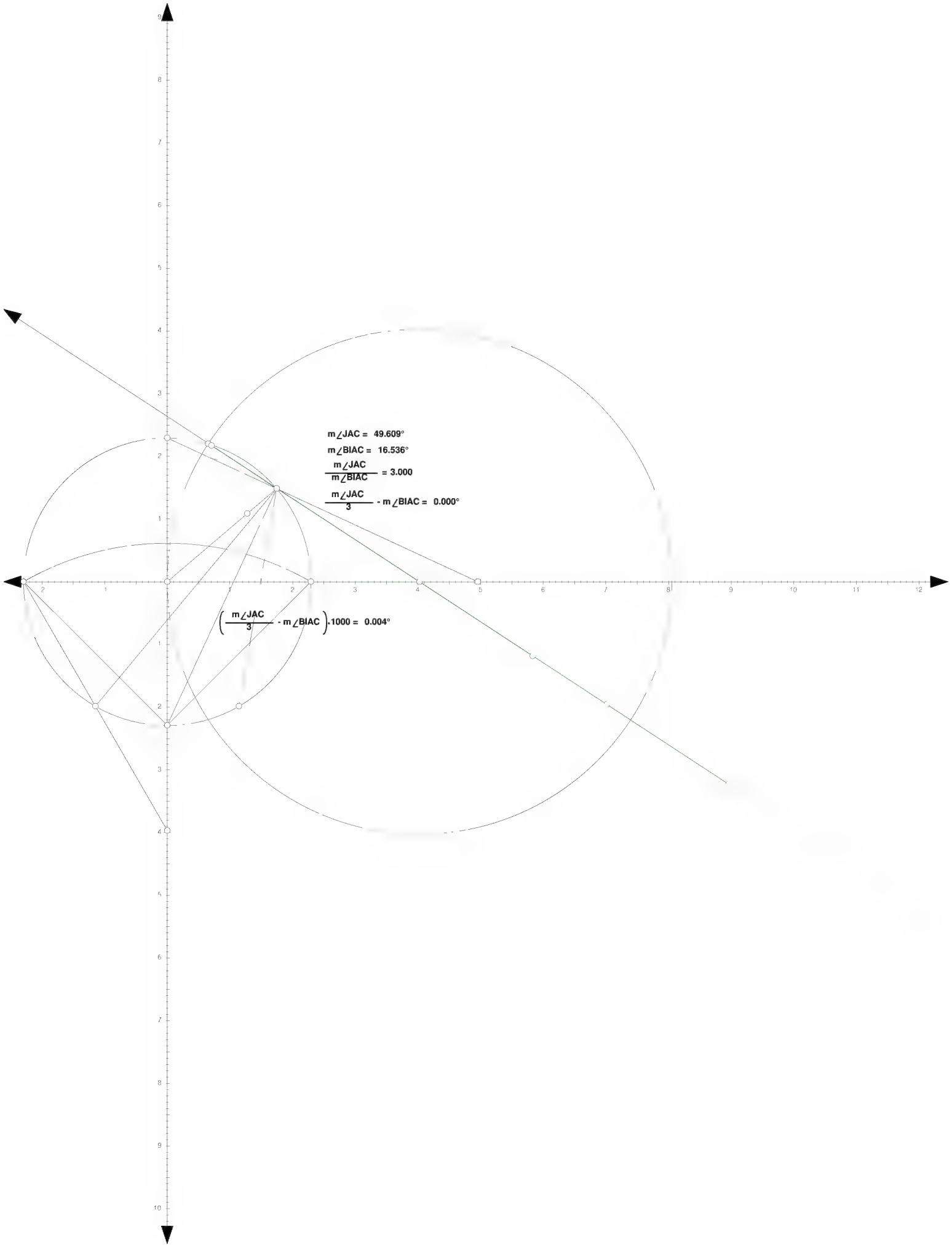

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 44.582°
m∠JAC / 3 - m∠JSAC = 0.000°
m∠JAC = 44.582°
m∠MMMOMN = 60.000°
OBC = 0.264 inches


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 50.070°
m∠JAC = 50.070°
m∠JAC / 3 - m∠PXAC = 0.000°
4
3
2
1
-1
-2
-3
-4
-5
-2
-1
1
2
3
4


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 46.326°
m∠JAC = 46.326°
m∠JAC / 3 - m∠PXAC = 0.000°
m∠QHQEQG = 120.000°
m∠QLQEQK = 60.000°

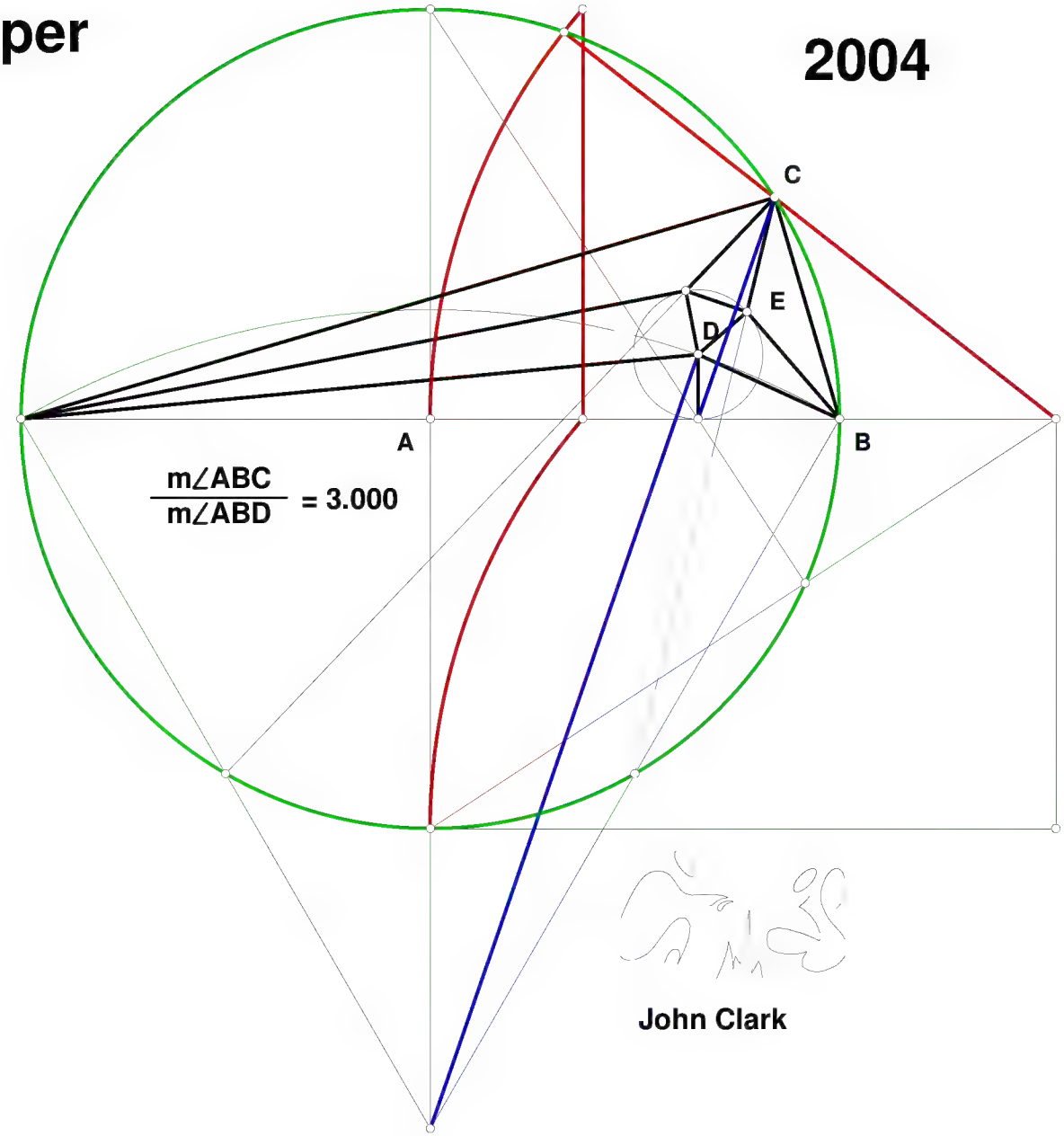

→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m∠JAC = 53.164°
$\left(\frac{m\angle JAC}{3} - m\angle JSAC\right)\cdot 100 = 0.000°$
m∠JAC = 53.164°


→ Move J->HJ
→ Move J->HH
→ Move J->HI
→ Move J->HG
→ Move J->HL
→ Move J->HK
→ Move J->HN
→ Move J->HM
→ Move J->HO
m ∠JAC = 48.569°
$\left(\frac{m\angle JAC}{3} - m\angle JSAC\right)$ .100 = -0.002°
m ∠PZJQRX = 32.379°
$\frac{m\angle JAC}{m\angle PZJQRX}$ = 1.500
m ∠JAC = 48.569°


m∠JAC = 49.609°
m∠BIAC = 16.536°
m∠JAC / m∠BIAC = 3.000
m∠JAC / 3 - m∠BIAC = 0.000°
(m∠JAC / 3 - m∠BIAC) · 1000 = 0.004°

Three Pieces Of Paper

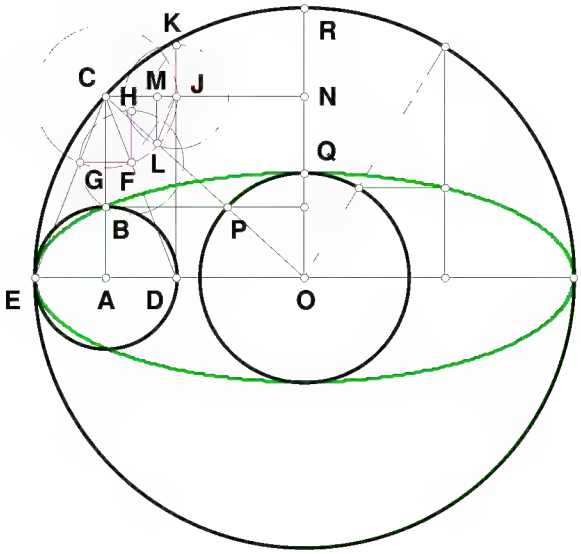
2004



John Clark

Given AE, AG, AC find the ellipse

031704.mcd



Or given any AE, AC find the diameter of the Circle.

$N := 3$ $AE := 1$

$AC := AE \cdot N$ $AG := AE$

$DE := AE \cdot 2$ $CJ := AE$

$CE := \sqrt{AE^2 + AC^2}$

$CG := AE$ $FG := \frac{DE \cdot CG}{CE}$

$JL := FG$ $JM := \frac{JL^2}{2 \cdot CJ}$

$CM := CJ - JM$ $LM := \sqrt{JL^2 - JM^2}$ $NO := AC$ $CN := \frac{CM \cdot NO}{LM}$ $AO := CN$ $EO := AO + AE$

$OP := \frac{AE^2}{LM}$ $Major := EO$ $Minor := OP$

$Major = 5$

$Minor = 1.66667$

$Major - \frac{N^2 + 1}{2} = 0$ $Minor - \frac{N^2 + 1}{2 \cdot N} = 0$

$\frac{Major}{Minor} - N = 0$

Given AC, AB and either pont of contact, D or F from any C, what is the lenght of the cord DF cut off by a line from any C? **032304**

$N_1 := 1.708$ $N_2 := 1.649$

$N_3 := 1.24$

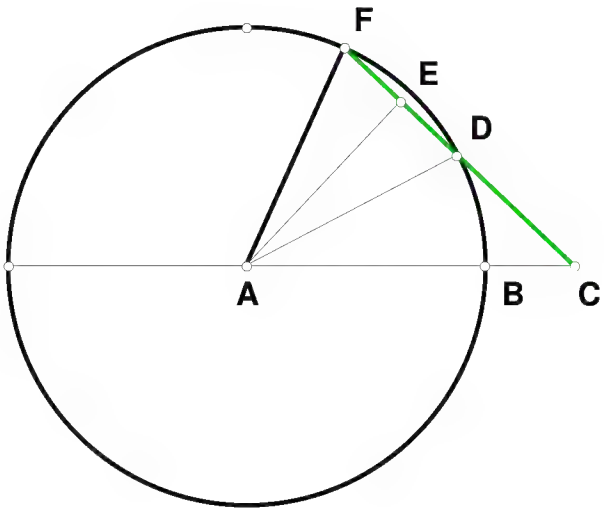
$AC := N_1$ $CF := N_2$

$AF := N_3$

$$DF_1 := \frac{N_3^2 + N_2^2 - N_1^2}{N_2}$$

$CD := CF - DF_1$ $N_2 := CD$

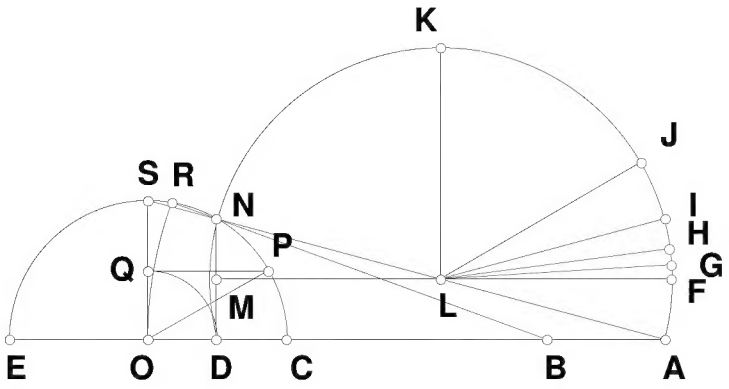
$$DF_2 := \frac{N_3^2 + N_2^2 - N_1^2}{N_2}$$



$DF_1 = 0.812$ $DF_2 = -0.812$ $DF_1 + DF_2 = 0$

0405043

All this extra work and I have lost accuracy from 022803!



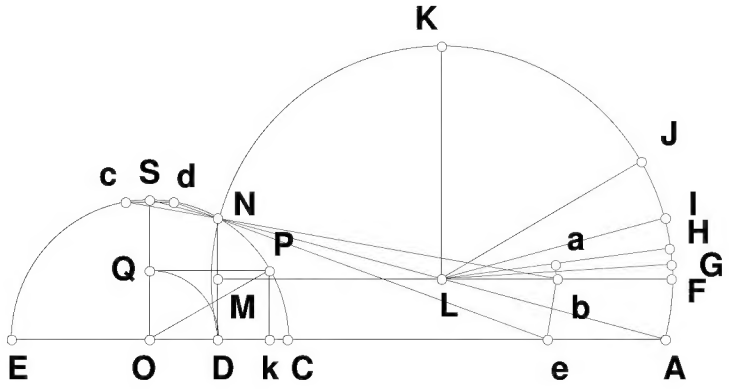
$N := 4 \qquad CE := 1$

$CO := \frac{CE}{2} \qquad CD := \frac{CE}{N}$

$DO := CO - CD$

$DN := \sqrt{(CO + DO) \cdot (CO - DO)}$

$AD := \frac{DO \cdot DN}{CO - DN} \qquad DM := \frac{DN}{2}$



$AN := \sqrt{AD^2 + DN^2} \qquad HL := \frac{AN}{2} \qquad LA := \frac{HL}{2} \qquad Ok := \sqrt{CO^2 - DO^2} \qquad Ck := CO - Ok$

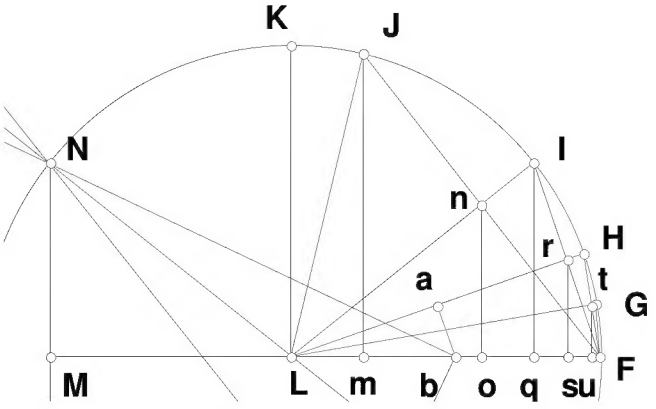
$Fm := \frac{Ck \cdot HL}{CO} \qquad Jm := \frac{DO \cdot HL}{CO}$

$JF := \sqrt{Fm^2 + Jm^2} \qquad Fn := \frac{JF}{2}$

$Fo := \frac{Fm \cdot Fn}{JF} \qquad Lo := HL - Fo$

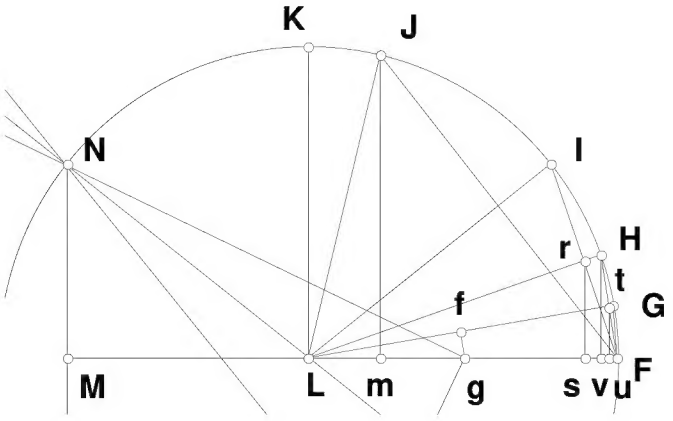
$no := \frac{Jm}{2} \qquad Ln := \sqrt{no^2 + Lo^2}$

$Iq := \frac{no \cdot HL}{Ln} \qquad Lq := \frac{Lo \cdot HL}{Ln}$



$Fq := HL - Lq \qquad FI := \sqrt{Iq^2 + Fq^2} \qquad Fr := \frac{FI}{2} \qquad Fs := \frac{Fq \cdot Fr}{FI} \qquad Ls := HL - Fs \qquad Lr := \sqrt{HL^2 - Fr^2}$

$Lb := \frac{HL^2}{2 \cdot Lr} \qquad rs := \frac{Iq}{2}$



$$Lv := \frac{Ls \cdot HL}{Lr} \quad Hv := \frac{rs \cdot HL}{Lr}$$

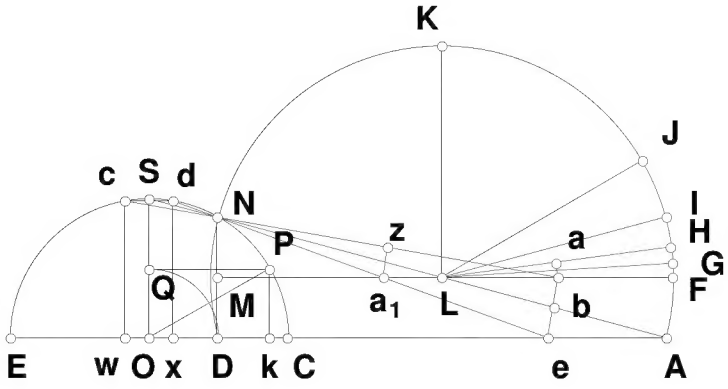
$$Lv := \frac{Ls \cdot HL}{Lr} \quad Fv := HL - Lv$$

$$FH := \sqrt{Hv^2 + Fv^2} \quad Ft := \frac{FH}{2}$$

$$Lf := \frac{HL}{2} \quad Fu := \frac{Fv \cdot Ft}{FH} \quad tu := \frac{Hv}{2}$$

$$Lu := HL - Fu \quad Lt := \sqrt{Lu^2 + tu^2}$$

$$Lg := \frac{Lt \cdot Lf}{Lu}$$



$$MN := \frac{DN}{2} \quad NL := \frac{AN}{2}$$

$$ML := \sqrt{NL^2 - MN^2}$$

$$Mb := ML + Lb$$

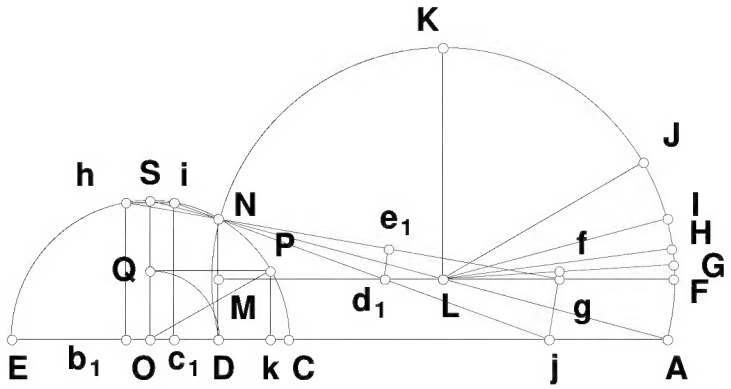
$$Nb := \sqrt{MN^2 + Mb^2}$$

$$Nc := \frac{CO^2 + (2 \cdot Nb)^2 - (2 \cdot Mb + DO)^2}{-2 \cdot Nb} \quad cw := \frac{MN \cdot (Nb + Nc)}{Nb} + MN$$

$$Dw := \frac{2 \cdot Mb \cdot (2 \cdot Nb + Nc)}{2 \cdot Nb} - 2 \cdot Mb \quad Ow := Dw - DO \quad Dx := Dw - 2 \cdot Ow \quad Ma_1 := \frac{Dx \cdot DN}{2 \cdot (cw - DN)}$$

$$Na_1 := \sqrt{MN^2 + (Ma_1)^2} \quad ba_1 := Mb - Ma \quad Nz := \frac{(Na_1)^2 + Nb^2 - (ba_1)^2}{2 \cdot Nb} \quad za_1 := \sqrt{(Na_1)^2 - Nz^2}$$

$$be := \frac{za_1 \cdot Nb}{Nz}$$



$$Mg := ML + Lg$$

$$Ng := \sqrt{MN^2 + Mg^2}$$

$$Nh := \frac{CO^2 + (2 \cdot Ng)^2 - (2 \cdot Mg + DO)^2}{-2 \cdot Ng} \qquad hb_1 := \frac{MN \cdot (Ng + Nh)}{Ng} + MN$$

$$Db_1 := \frac{2 \cdot Mg \cdot (2 \cdot Ng + Nh)}{2 \cdot Ng} - 2 \cdot Mg \qquad Ob_1 := Db_1 - DO \qquad Dc_1 := Db_1 - 2 \cdot Ob_1$$

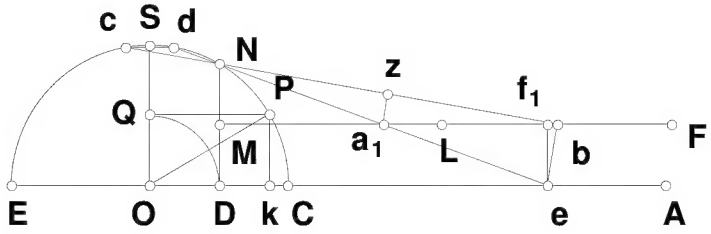
$$Md_1 := \frac{Dc_1 \cdot DN}{2 \cdot (hb_1 - DN)} \qquad Nd_1 := \sqrt{MN^2 + (Md_1)^2} \qquad gd_1 := Mg - Md_1$$

$$Ne_1 := \frac{(Nd_1)^2 + Ng^2 - (gd_1)^2}{2 \cdot Ng} \qquad ed_1 := \sqrt{(Nd_1)^2 - (Ne_1)^2} \qquad gj := \frac{ed_1 \cdot Ng}{Ne_1} \qquad Ne := \frac{Na_1 \cdot Nb}{Nz}$$

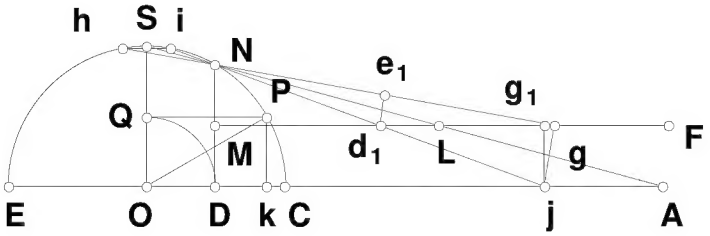
$$ea_1 := Ne - Na_1$$

$$ba_1 := Mb - Ma_1$$

$$bf_1 := \frac{be^2 + ba_1^2 - ea_1^2}{2 \cdot ba_1}$$



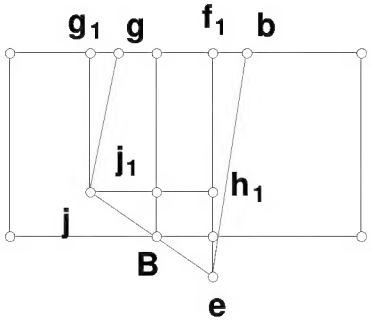
$$ef_1 := \sqrt{be^2 - bf_1^2}$$



$$Nj := \frac{Nd_1 \cdot Ng}{Ne_1} \qquad jd_1 := Nj - Nd_1$$

$$gg_1 := \frac{gj^2 + gd_1^2 - jd_1^2}{2 \cdot gd_1}$$

$$jg_1 := \sqrt{gj^2 - gg_1^2}$$



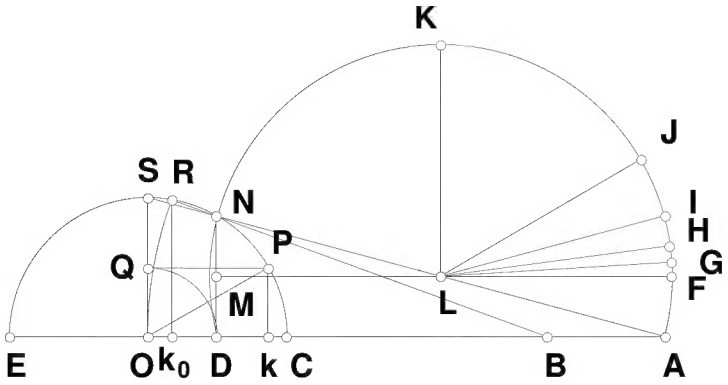
$$Mg_1 := Mg - gg_1 \qquad Mf_1 := Mb - bf_1$$

$$jh_1 := Mf_1 - Mg_1 \qquad eh_1 := ef_1 - jg_1$$

$$ej := \sqrt{jh_1^{\,2} + eh_1^{\,2}} \qquad Bj_1 := DM - jg_1$$

$$jj_1 := \frac{jh_1 \cdot Bj_1}{eh_1} \qquad BD := Mg_1 + jj_1$$

$$BO := BD + DO$$



$$BN := \sqrt{DN^2 + BD^2}$$

$$NR := \frac{CO^2 + BN^2 - BO^2}{-BN}$$

$$Bk_0 := \frac{BD \cdot (BN + NR)}{BN}$$

$$Ok_0 := BO - Bk_0$$

$$NR - 2 \cdot Ok_0 = -0.000000000019581$$

Compared to 022803

$$Om - \frac{Ek}{2} = -0.000000000002639 \quad \blacksquare \quad \frac{19591}{2639} = 7.423645$$

Book of Paths

The One

John Clark

John 312

The Book of Paths

Saturday, September 23, 2023

This book is the first book of a work called The Art of Prophecy which is a book introducing and proving the relationship between Language and Grammar. It introduces one to our Grammar Matrix, a matrix which uses binary recursion in its four basic configurations, Common Grammar, Arithmetic, Algebra and Geometry. Language is Universal and Intelligible, while Grammar is Particular and Perceptible, constructed by a species commensurate with its intelligence. What one acquires from this work will depend upon one's ability to effect the higher reasoning power of metaphor. It provides one with experience of intelligibles by experience using their own hand and their own mind, in a metaphor, which looked very good in the Prophets, but very bad in Revelation as the mark of the beast. It is a biological fact that we regulate behavior by turning the past into a future, and bringing that future to pass. All a mind can do is process information, and that is an art which has little to do with learning to repeat the rubbish of mystics.

This one ability is also known as a Pearl of Great Price; no greater ability can be given a from of life.

Normal people will not be able to make much of it. This book is not yet finished. When completed it will comprise four divisions, 1 Crossing Swords, 2 Swords on the Moon, 3 Observatory, and 4 Roll Away the Stone; the last section has more plates than the first three combined. The basics of this work is already in the work called Basic Analog Grammar Sample Dictionary. The work should be sufficient, if diligently studied, to make one confident in the fact that all grammar systems are designed, by biological fact, to afford a functioning mind with the Art of Prophecy, or again, the ability to predict the results of a data set using our four basic systems of grammar.

The majority of human science focuses on the perceptible; however, mankind is defined by his mind, the intelligible. The perceptible is to the relative difference as the intelligible is to the correlative. The interactions between everything are via the correlative. Along these lines one would be hard pressed to find any perceptible examples in history which are focused on presenting examples which, by their very nature, aid in learning the fundamentals of intelligence. As the intelligible is not, nor ever can be perceptible, it does not mean that one cannot construct perceptible examples which must always adhere to the principles of these intelligibles. This is what

these examples do, afford exercises in pairing the perceptible with the intelligible. This is what geometry brings to the table of grammar instruction; examples which isolate and clarify the intelligibles of information processing. In short, learning is becoming habituated into saying exactly what you see as the result of your own behavior. In these examples, and the practice with them, one learns standards of behavior by asserting correlatives to relatives to produce truth in information processing. This truth reveals the power of grammar which we can achieve for ourselves.

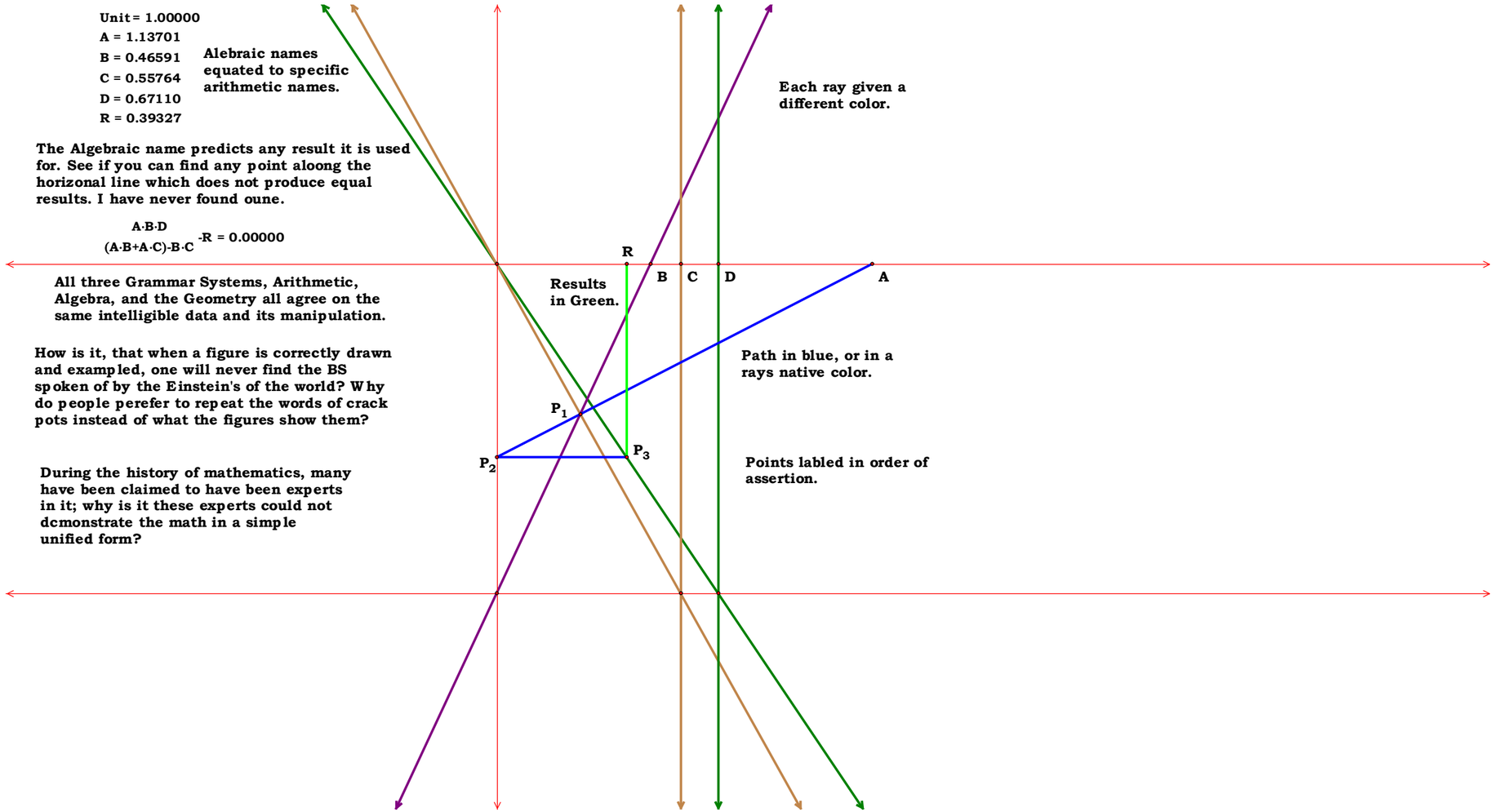
In this book, one will find the lines are divided into two categories. One category is called the ray, a line unterminated, i.e., infinite. The second category are what have been called line segments, terminated. The termination is traditionally called a point. The unterminated lines are the data line, or stand for the perceptible and the hypothetical nature of their infinitude. The terminated lines belong in the category of the grammar system by which the data is examined. The grammar affords us the ability to ask and answer questions about the data; for example, if such and such is done, than such and such will result. They clarify the prophetic nature of grammar and form the foundation of The Art of Prophecy.

The data is independent of the grammar, and the grammar is independent of the data. These examples can then be used to ask yourself questions in regard to those who claim that grammar effects the data and thus contaminates the result, for example the Einstein's and Schrodinger's, and is something else going on which is beyond the intelligence of these people? What is the actual source of the mythological stories in regard to information processing? Is there really some mythological circumstance whereby the simple operations used for information processing generate these mythologies, all of which include a host of self-referential fallacies, or is someone simply delusional due to a limited and insecure intelligence? Are the results of information processing derived from the principles of Grammar or from mythology even under the name of theory?

All of this, of course, involves the question; how easily are you persuaded to abandon simple truth? Can you improve your resistance to it?

Do we testify to what we have seen, and speak of what we have known? In short, is grammar a pairing, what we say, with actual information, or is the pairing performed by pencil (mental) masturbation?

The best place to examine and learn the fundamentals of information processing is by using the simplest method of examination. This simple method has, however, no constraint on the complexity of the equations used in the examples, equations which, our mythologers all correct, as they say, by their own imagination. Mythology ports one away from the simple truth into a realm of obfuscation and confusion, separating one from any solid foundation. If you do not draw the examples in an interactive environment and let them teach you, you will not learn. If someone can show you the path to learning to be true, then it should follow that you need not listen to them about their fancy stories.



So, ask yourself, why is it when people speak of the paper, they perform their operations on as being crumpled, or as rigid rod's, clocks, plane surfaces heated over a campfire, or mysteriously corrupted measurements due to weather conditions which you cannot see, that these do not incite one to laugh? Why not simply say hocus pocus? What part of an equation is a clock, or anything else? If you cannot separate the perceptible from the intelligible, you certainly cannot know which is the grammar, and which is the data. What part of your education enforced the ground upon which a mind must operate in order to be true?

In geometry, there has been some who have protested about extending a line in a figure which produces some uncertainty, but here, in these examples, all the data lines are dismissed as being infinite, or again, a raw verb or again, a relative. One is free to slice and dice them for use with some other purpose; but here we are examining the paths of grammar, of intelligence, which apply to all data. This eliminates the hair brained claim that there are Laws of Nature, or of this or that, everything anything can do is assert a correlative, and claiming that the Laws of Nature change due to size, anyone with intelligence should see the self-referential fallacy of those doctrines. It is not possible that an assertion is different from an assertion. It is not possible for Law to differ from Law. There is one, and only one, operation possible, the assertion of correlatives, the relative is always a given.

Not knowing, that by definition of a thing, the relative is always given, and the correlative always asserted, as the foundation of all information processing, will always incite the feeble-minded mystics to spout gibberish.

About the Author

Tuesday, October 17, 2023

One might ask, why I devoted my life to this work. I could cite many particular reasons, but recently my daughter provided a good one. Let me set the stage. I have been diagnosed with congestive heart failure and chronic cardio-vascular embolisms, seeping edema in my legs from sitting at computer for so long working on this project. Our government, federal and state have stolen my life from me, I am impoverished because I worked all my life and our government is one of leaches. So, I asked my daughter to help me get my I.D. card, get to the bank, and then take me to do a walk-in at the hospital because now, something has gone wrong with my skin and something else in my groin area. I do not know if it is a hernia or cancer. At first my daughter reluctantly agreed as she had nothing to do, but later she called me back and said: Take an Uber.

Really?

Well, I finished this today anyway, maybe I will find another way to get to the hospital.

Evolution—The Chance to Become Human

Monday, December 31, 2018

People respond to evolution in various ways. Some claim there is no such thing, and others that there is. Many people excuse their behavior with the argument between nature and nurture; the worst of which excuse their behavior in such terms as; I did not ask to be born. I did not ask to have such bad parents or live under such a corrupt government; and those that accept this approach answer in various ways, as if the statement were somehow valid, i.e., they assume that they are capable of making that judgment also. However, we are a biological learning machine and we learn by asking and answering questions. In order to answer a question, we have to ask it, but asking it means we have to ask about all the minutia, the details in answering that question; most skip this stage by assuming the answer to begin with. What does it mean to assume one knows the meaning of the words used? In short, we are always asking and answer using or attempting to us a grammar system.

Therefore, when we are born, what question should we be asking, what minutia do we have to learn to answer it? Well, we are born into a species called Man and we should eventually realize that being born we should ask, What is a Man?

Plato showed the way to answering this question, which Aristotle, a student of Plato, put into a concise form: *That which has a function exists for that function.* In the short of it, every thing is composed of a relative and correlative, therefore, if we are a thing, we exist because of the relative, or the verb, the material difference. Therefore, by the very physical fact of what a thing is, if we claim to be some-thing, we have a function, a relative difference. In Plato's Alcibiades, we learn how to jump over all the minutia of the question to arrive at the fact that we are a mind. A mind is a life support system of the body, and like all life support systems of the body, it is designed to process abstractions from the environment.

At some point we learn that all we can do is to read, using the body which is called Perception, process what we read, which is called Conception, and write the results of our processing back to the body to construct our own behavior, which is called Will. Perception, Conception, and Will. A long, long time ago, this was transformed into the metaphor of heart: What it takes in, is what it contains, and what it contains, is sent out so that we can have life, and have it more abundantly,

i.e., heart is a metaphor for the function of Truth, a certain identity about ourselves and our job. Christ put this into another metaphor; Do unto others as you would have them do unto you. There are many ways to state, and repeat this Law, such as, you cannot buy or sell unless you have the mark of the beast, or that which distinguishes man from all other forms of life.

One can see that we can denote quite a long diversion about what we are, why we are, and how it is that we do our biologically defined job as Man. But how many can resolve the idea of being born, itself? Is it not, too, as question to be asked? What is Man? and should it not also be answered that being born is the question itself? Evolution is the chance to answer the question, What is Man, and how do I become one? Then, when one knows these answers, one can answer evolution, which gives us the question; do I want to be a Man, or something else, or even, not at all?

So, from the start of this essay, and by example, it can be dragged on as long as one likes, but it resolves down to, I was born in the species Man, but do I want to be a Man, and can I possibly answer that question without first mastering literacy, the use of names by which it alone can be answered?

Saying that one was not asked to be born, is a response by a fool for it is a self-referential fallacy, a statement of no meaning. Nobody exists before being born and given the chance to learn to function as a life support system, but to date, most people have answered, “John, nobody cares about that shit anyway.” But I know that already, for nobody has had the wit to examine their life and as Socrates said; the unexamined life is not worth living. Examination is not just perception, it is the ability to read, and process information, by which we craft our own behavior. Who, have I ever known, has attempted to do that? No one. No one has taken the chance to become Man and achieved it.

The minutia of asking and answering questions is found in four specific systems of grammar, a Grammar Matrix; Common Grammar, Arithmetic, Algebra and Geometry. If you cannot demonstrate any ability with saying the same things in all four, then you have never examined your life; all you can do, is read, process, and write, yet you have never attempted to achieve this. You are more complex than any computer made, yet a computer can do this, but not you. Why is that? The reason is evolution. Evolution makes it possible for you to ask and answer one simple question, so, you simply are not evolved enough to be a Man. Evolution gives you the chance to have dominion

over the earth, yet you believe that this dominion is not the dominion or a life support system. That condition means that we are stupid, still a species of fools.

How do you Know?

Monday, December 31, 2018

How do you know such and such? I.e. one is asking to retrieve from memory some bit of knowledge by which to form a judgment. Knowledge, our job, is the effective use of memory. So, consider this:

Examine each figure, whether simple, or one which requires what are called functions exhibited by the book Roll Away the Stone, pardon me if I do not use the waste my time notation of mathematicians and simply change the case of the letters. How do you construct any particular judgment? And then, does that judgment change involving infinite changes, infinite particulars, in the givens? No. By figuring something out one time, one has a memory which can be used, potentially, an infinite number of times.

So many times, do you hear, or convince yourself, that a judgment about the same path, changes in accordance with particulars. Ask the figures, is this true?

Human Behavior—The Equation

Friday, October 13, 2023

What is the functionally correct standard by which to judge human behavior? Is it by social norms, a statistical average, or is it factually by the definition of Mind which produces that behavior?

Is it right to judge a person's value in terms of being normal? Or is it factually correct to judge a person's value in terms of doing their biologically defined job? Do your judgments about any person have a single standard or a multitude?

Is it possible to establish a Science of Human Behavior when one is incapable of selecting the correct standard upon which that science must abide?

Is it possible to construct any governing body over humanity when there is no humans who have the wit to judge the difference between right human behavior and wrong human behavior other than social norms and customs?

Have you, the reader, correctly answered any of the above questions, or do you simply respond as a normal human being, a normalcy commensurate with a stage of human development, or the customs you can parrot?

Do you, the reader, respond to words in accordance with their definition or by your own personal customs? Do you even know what a definition is? Do you know the difference between a definition and a description?

Is it possible to be capable of judgment without even being literate?

If there is one and only one standard by which to achieve in order to effect human behavior, is it not then a biological imperative to attempt to achieve it?

Plato, in his dialogs, taught people something which Aristotle put into a simple sentence: That which has a function, exists for that function. In first principles, Plato put it that a thing exists when it is a relative contained by correlatives, and the relative has a synonym which is called power and power. If one realizes that function and duty are synonyms, what is our duty? What is the duty we are born to achieve? Is it, as put in the metaphorical story of Genesis, to learn judgement like

God? And is judgment just a grammatical product which must in every way conform to the principles of grammar dictated by Language, the very definition of every thing?

Plato was a Grammar Teacher who used Socrates metaphorically to teach a Grammar Matrix. This work is a derivative. It can help teach the so-called Socratic Method, or again, the Science of Human Behavior.

There is a form, available to very advanced forms of life which people like Socrates and other people called prophets have been guided by, we might call it telepathy today, but which is has not been made available as a method to guide individual human behavior as a species, i.e., we do not all have this baby sitter making judgments for us. That is not the function of a teacher, the prophets are trained and used to help in goal of making a functional human species, a species that will do its biologically defined job. We are all responsible for our own behavior, and we have a perfect means of doing just that. It is that method we are being driven to use. It is not the job of what people call gods, or aliens, spirits, and the like to tell us what to do, to make our judgment for us, to enslave superiors to be our baby sitters. It is our job.

Human behavior is commensurate with the intelligence of a person and that intelligence is measured as a ratio by which a mind can turn Language, which is Universal and Intelligible, into a Grammar Matrix, which is Particular and Perceptible, into life supporting behavior.

In short, acting badly is a product of a fool.

Judgement and Gibberish

Tuesday, October 17, 2023

Thousands of years ago, it was written that at a certain point in human evolution, the wisdom of all mankind would suddenly vanish. Therefore, can we, ourselves, prove or disprove this statement, i.e., is it judgement or gibberish? It is very easy to prove its truth, for it is indicative of a cusp point in human evolution. A mind is responsible for judgment, and judgment is only effected through literacy, and literacy is afforded by a Grammar Matrix, which is still not taught by mankind as the foundation of his humanity. At some point in human evolution mankind will finally understand what he is, why he is, and how to do his biologically defined job, for a mind, when functional, is the most powerful life support system possible. This statement about human evolution, is repeated several times in what is known today as the Bible, a work which was given to mankind to aid in his evolution, i.e., the proof of alien intervention in the history of man's evolution; or again, guided evolution. If there is advanced life in the universe, other minds doing the work of mind, then it follows, they would work to promote that functional ability across the Universe. One can say, the converse of Hollywood. As this statement is the foundation of the Bible, it also follows that the work could not have possibly been produced by man, for that would be a simple self-referential fallacy, a violation in the Law of Identity, or again, a tense error: no man can know what he will become when he does not even know what he is.

I was fortunate, even though terrified, that I became aware of this involvement at an early age. Along the way, I was asked to do a work for mankind, to leave behind me another artifact to also aid in human evolution. All of my work is aimed at that as its goal. The Prophet has always been a biological fact, that life support system which functions intelligibly via our Grammar Matrix. The claimed belief that The Prophet is some individual is a self-referential fallacy held by the mentally incompetent. Our Savior, our God, is as written, the ability to distinguish being right or being wrong, especially in regard to life supporting behavior, which is the biologically defined job of a mind; a fact which can be proven only by the literate.

Today, the state of mankind is his inability to distinguish the difference between judgment and gibberish, i.e., mankind is mentally disabled. The proof of this condition, the condition which even resides in you, the reader, is relatively simple.

The mind is evolving to regulate human behavior in accordance with a simple physical fact; this fact is that all of information processing is afforded by, as the computer today demonstrates, binary recursion. Physically described is as Plato, and even the Bible intimates, there are, by the definition of a thing, two, and only two parts of speech. One of those parts is a given, the other is applied as the interaction between things. All a mind, or anything else can do, is apply limits, boundaries to other things, even in the Art of Prophecy, or again, Grammar. The exercises in this part of the work, the Art of Prophecy is designed to exercise and reflect upon the paths one asserts to given relative differences, and how the same paths can radically change their physical appearance, while what they do intelligibly is always constant. Every sentence, every equation, is a mapping of assertions which has been made upon things, i.e., these pathways are what denotes the important part of memory and behavior.

Binary recursion is the foundation of information management, be it in a computer or in a functional mind. In short, Grammar is supposed to be the clear, and demonstrable principles, in regard to every grammar of mankind, of information management via binary recursion, yet there is today, no grammar book which teaches this to anyone; not today, nor at any time in man's past history, i.e., mankind does not even know how not to speak gibberish. With sufficient intelligence, one can learn from constructing, viewing, and drawing conclusions from these computational machines.

Every form of information processing, regardless of the countless names that has been given it, is afforded by the assertion of limits to a given relative difference; from carving wood, stone, or judgment nor matter how complex. This book presents one with a focused practice of that process. You want to learn how to shape a life? Start simple.

If you want to learn Truth, you must first learn to be true, so that you can use your own experience as an example by which to examine anything. We know all truth via our Grammar Matrix, if you are illiterate of that, you can never know Truth at all. In the past, man's claim to seek and know truth, has been a delusion; if one cannot demonstrate simple judgment, they can know nothing at all about truth.

The Bible describes the function of a mind; The ability to turn the past into a future, and to bring that future to pass; you might know this statement simply as the Name of the Beast, 666; a child's puzzle. It means the same thing as, the Testimony of Jesus is the Spirit of Prophecy and as written,

I am here to help teach the Art of Prophecy. Therefore, consider each equation in Algebra, if one fills into the Algebra an arithmetic value, that equation will tell you what will be produced, i.e., predict it, and the Geometry shows you that it will come to pass. Always practice it, and let it anchor your mind. In order to do the job we are being made for, we must know how to predict the results of our own behavior before effecting that behavior upon the world.

If you love the Word of the Lord, then learn how to be true in using words, and shun those makers of doctrines which almost always claim that someone is special, so special they do not have to prove anything. The environmental crisis of today demonstrates that every religion on the face of the earth today, is a lie; no life support system is designed to harm a balanced ecosystem. Man is made, as proven by biology, and the Book, to learn from the past to make a future on this planet in truth, not doctrine, but truth.

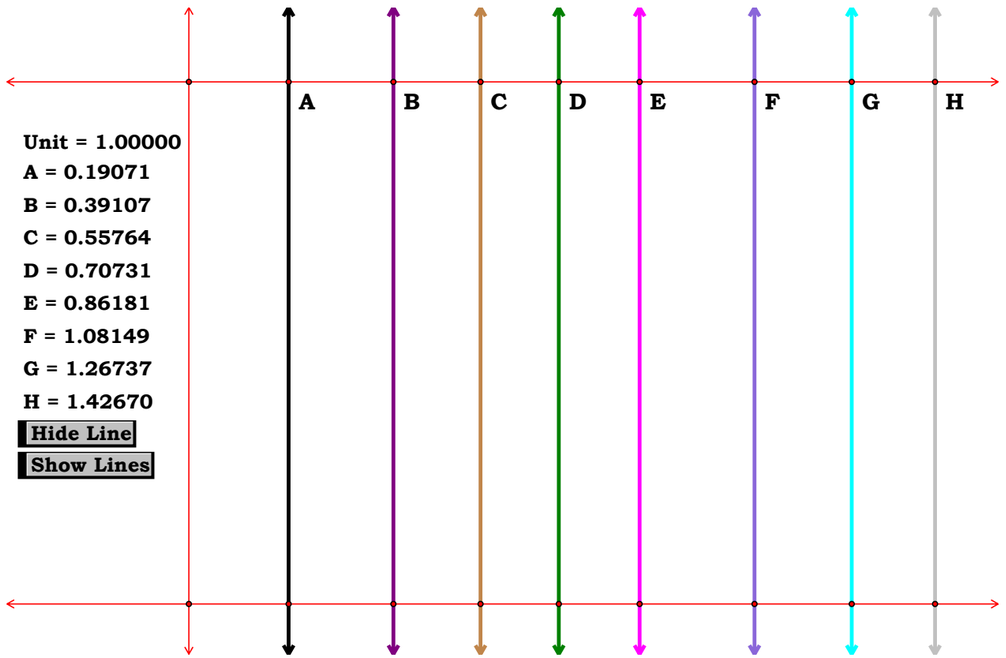
Learning Goals

Tuesday, October 17, 2023

Those who can get the most out of this work have arrived at asking themselves the most important question possible. Only by answering it correctly can one then get the most out of this work. The question runs something like the following: How do I know that what I think and do is true to fact? For, if I cannot think in truth, I cannot behave in truth towards myself or the environment and all the days of my life are wasted and pointless: my existence is then at least pointless and may be even detrimental. I, myself, can either be good or good for nothing, called evil.

Answering the above question correctly, and being aware of its meaning, will lead one to a life of study on how to be true to ourself; what we are, why we are, and how to do our biologically defined job as a life support system. Our self is not what we flatter ourselves to be, but what we factually, physically, and biologically, *are*. It is easy to say stupid words such as; *I think*, *therefore I am*, when one has no idea whatsoever the truth of what thought provably is. Gibberish is not thought. A pile of words does not make a rational statement. The proof, afforded by words, requires a rigid knowledge and adherence to each member of our Grammar Matrix; Common Grammar, Arithmetic, Algebra and Geometry. Mankind has put these four at odds with one another through his illiteracy; i.e., he cannot demonstrate truth at all. Evolution is the battle for becoming Man. Any fool can claim to be a Man, only a Man can prove it.

Each figure starts with some number of givens:—



These are always givens; they only differ in their quantity and you can place each of them wherever you desire on the line of names. We learn, by practice, that applying a given sequence of behaviors upon them, we will always acquire an exact result. In short, we take the *Law of Identity*, historically expressed in the simple as A = A, and should arrive at the definition of a thing as stated by Plato, between two correlatives is one, and only one, relative, i.e., there are two, and only two, parts of speech the same as demonstrated by any computer today. This can also be stated as, Equal processes performed on equal things, yields equal results; which actually covers every so-called axiom. We can also say it as, relation to self is inadmissible, or given any element, the relative and correlative of a thing, it cannot be predicated of any other thing for it is the sum of those two elements which Plato also called a noun, for correlative, and verb, for relative. Each can never be the other, or another.

One important myth to shake off, if one has acquired any belief in it, is that operations performed on our starting convention of names can possibly create a new type of name. For example, there are no such things as positive and negative numbers, no such thing as real, imaginary, transfinite, transcendental, Euclidean, etc., numbers. A number is a name derived from the arithmetic

convention of names and no name produced comes with a package of attachments, or adjectives. Such nonsense implies this fiction is true in all four of our naming conventions, when in fact, each of them only afford the four basic ways to effect binary recursion.

We take a geometric matrix, apply behaviors to it which we also transform into Algebraic equations, the result will be a specific arithmetic result, the sum of our actions. All of our grammar systems are a method of effecting binary recursion and we learn to pair them correctly.

We take givens, apply our behavior, and log our results. In short, as a mind, we take perceptions, process those perceptions, to produce our behavior, then we can record the whole process in truth. We are not a cog in a wheel, we make the wheel and roll it for a purpose; if we are functional.

Those who claim man has no purpose, or that his purpose is defined by something or someone else, are simply too stupid to know what life is. When you have asked the question, about yourself, and can face the answer and live by it, you can become a functional, life supporting, human being.

As we are responsible for the behavior of the body within which we reside, we first learn the Law of Identity in regard to our own behavior and study it all the days of our life. This biological fact is given in the Judeo-Christian Scripture, simply called the Bible, long before man had any understanding.

Psychology is commensurate with the Principles of Language which are *functionally* resident in the mind as a Grammar Matrix comprising *Common Grammar*, *Arithmetic Algebra and Geometry* and we must learn this functional behavior to be a person of worth; a person which honors that which is making them. Honor is the striving to become part of a life support system of humanity, not a slander of idle words as practiced by mankind today by the horror of his behavior demonstrated by the destruction of his own ecosystem. Every corporate structure today, from religion to science is guilty of this failure and that is because Man is actually a rare thing upon the earth today. It is the sum of each and every person, seeking to be true to themselves, which can change this horrible fact.

Principles of Grammar

Wednesday, October 4, 2023

What is Grammar?

Grammar is the standards of mental behavior by which we are measured to be either functional or dysfunctional as a life support system of the body within which we reside. We are biological information processors and therefore; Grammatical Standards are the symbolic systems of information management by which we do our biologically defined job as the most powerful life support system possible.

If one cannot do their biologically defined job, they are not functioning as a life support system.

All a mind can do is to read information using the body, which is called perception. It then processes those perceptions in order to formulate responses to that information which is called reasoning, judgment, prophecy, it then writes these judgments back to the body to produce our behavior towards the environment which is called will. Literacy is then defined in terms of reading, processing, and behavior towards the environment. In a metaphor, The Father, The Son, and the Holy Spirit are One, or again, perception is our teacher, conception is learning, what we learn we do. One way to say this is:

Psychology is commensurate with the Principles of Language which are functionally resident in a mind as a Grammar Matrix, which defines the relationship between an individual and his environment as being either good or evil as defined by the definition of a life support system.

Suffice it to say is that each individual is wholly responsible for their actions, their behavior, within the environment. No one else is responsible for feeding you, or anything else, and likewise, no one has the right to take advantage of you, or to deny you the right to behave in accordance with

the principles biologically defined, as a life support system whose behavior is determined by the Standards of Grammar.

This is a very important point; no individual has any rights over another because the Standards of Behavior is identical for all.

Therefore, a functional mind must recognize that there are standards of behavior, and also recognize human equality in regard to them. In short, we all are individuals, we are all part of the same Universe, and we all have exactly the same biologically defined job to do, maintain and promote life over our entire biosphere.

Now, I have been repeatedly told that, in the words of my last ex-wife, “nobody cares about that shit John!” but I cannot turn my back on such a simple and obvious truth. We are given a biological imperative and a perfect method of complying with it, and ignoring it means we are simply brain dead which leads to the death of the body, and a wasted life.

We can only parse information, intelligibly and perceptibly; every bit of our behavior is determined by our own intelligence.

What is Information Parsing?

Every thing in the universe is defined as a relative constrained by correlatives, i.e., some material difference within limits. This is called a binary. Since every thing has the same definition as a thing, a relative within correlatives, what is a simple metaphor for learning how to comprehend it? Blinking.

Blinking involves the closing and opening of the eyes. When the eyes are shut, there is no perception, when they are open, if our eyes are functional, we see. Seeing is perception, but there is no perception when the eyelids shut it off. Thus, blinking parses information; off, on, off; just like a light switch; this is a binary. Or in terms of walking, stop, go, stop and the same is true for every sense we have.

This simple process is the entire foundation of information management. Blinking, giving us a binary, is basic information management. Doing this one act over and over again, is called binary recursion. Information management is then afforded by binary recursion.

Now, you probably have never considered that the ability to blink contains the idea of great power, however, consider the computer and the power it displays, it can process all information and it does so by this very same concept of information parsing of called binary recursion. All of information processing is simply afforded by the mastery of the blink, on, off, on, or a relative constrained by correlatives.

In learning grammar, one's Grammar Matrix, the power of Truth, one is not learning anything new, but learning how to use it. Your own thoughtless blinking does so with ease.

Any thing, every thing, is a relative constrained by correlatives, or one can say that any particular thing is one thing, or one blink.

Another basic concept in information processing is recognizing that information, the relative difference, as example by the eye, it perceives information, and the only thing the eye does is regulate it by blinking, or asserting the correlative. Every possible system of Grammar takes advantage of how we assert the correlative, the limit, or the boundary on information. The correlative Plato called a Noun, and the Relative he called a Verb.

Another way to comprehend it, is as a container, the correlative and the contained, the relative. You can call a thing a quantum, if you wish to be obtuse.

Now, do you suppose that mankind, in all his obtuse verbiage has ever been literate? It is easily proven that there are two, and only two parts of speech to master, yet mankind is always speaking gibberish. Why is that? It is called lack of intelligence; a sign of which is never being able to

comprehend, as Plato noted, First Principles, or the first principal parts of a thing, or an information packet. Pairing binary with perception such that one can construct grammar systems with it, involves recognizing, as Plato did, that all information is a binary construct. We should be able to follow Plato when he stated that all information can be expressed in geometrical paradigms. “Let no one ignorant of Geometry Enter Here.” As, by physical fact, all we can do is assert correlatives, this is true also of geometry; we can say the same things in a geometric figure as we do in any other possible system of grammar. Binary only produces a binary result.

We can enumerate our grammar systems using binary pairing and this enumeration, the product of two squared, yields; Common Grammar, Arithmetic, Algebra and Geometry, or four different methods of effecting binary recursion and each of them record the same about the same, a fact denied by the illiterate Einstein’s of the world. The literary product of symbolic information processing is determined by binary recursion, expressed by our Grammar Matrix, not the word salad of mystics who claim that information processing is the product of theories .

Prophet or Predator

Monday, October 16, 2023

By the definition of a thing as a binary construct, it is the ability to use this binary construct which makes the distinction between all forms of life.

If you examine the organizations around the world to judge their ability to distinguish the difference between the Prophet and the predator, one will find, invariably, that organizations, supported by the general population, will choose the predator. Why? The choice is based on their own psychology. This is common to all; mankind wants a prophet which will support the desires of the peoples current stage of psychological development. On the front page, for example of all these organizations is their asking for you to support them; not one of them asks you to support a standard of behavior which is biologically determined for the definition of a functional human being.

Psychology is commensurate with the principles of Language which are functionally resident in the mind as a Grammar Matrix. The mind is what will distinguish mankind from all other forms of life, not only on this planet, but throughout the whole galaxy. One might gather, or at least hope, that somewhere some species has successfully made that a fact for them, that they know and express the function and purpose of literacy, to make a dominate species, one which will do, as the puzzle of the Bible expressed many ways such as the Name of the Beast, is aimed at. A species which can tend the Garden of Life in all they do. That is currently not mankind.

No matter what stage of evolution a human being expresses, there is one fact which is common to them all, a mind produces their behavior. Evolution is proportionally commensurate as Language divided by Grammar, i.e., literacy.

All a mind can do is receive information from the environment, process that information, and use the result of that processing to effect a person's individual behavior, in short, once again, a form of life's behavior is commensurate with the principles of Language which are functionally resident in its mind, if it has one, as a Grammar Matrix. What does this mean?

There is only one Language, in a metaphor, produced by the Voice of God. That Language can be said to be a Universal Binary consisting of relative differences constrained by correlatives. And although the computer today, which can process all information, mankind still cannot grasp the idea what this means, that all information is afforded by binary recursion. A wise man once said,

as demonstrated in Genesis, let your yeas be yeas and your nays be nays, but man can still only quote a specific example, the words themselves, which still he does not try to effect, as the Universe, and all of reality affirms, must regulate the behavior of his own mind. This inability makes mankind, not a prophet of life, but a predator of it: not a Man, but a pretender of humanity.

Adam and Eve are a Conjugate Binary Pair; which by complete Induction and Deduction produces the Life of Man, in body, mind and soul and we are still striving to be Man, that Prophet, and evolution is weeding out the predators from our stock, mankind is still being refined, as written. Judgment Day, is the process of refining mankind until mankind can do the work he is being made for.

The Prophet is not any particular person, the Prophet is what God is Making, Man, himself. As all we can do is Language processing, in order to predict the best behavior possible, we are by definition, becoming what our lips declare, but which our behavior denies. Man wants a cake so that he can eat it too, yet he cannot discern a good one from a bad one. There is but one good, as demonstrated by reality, the ability to do our own work and hopefully, one day we will do it.

What artifact did God give mankind in the beginning? Was it not a Book to remember the Lord? What artifact will be given again? Judgment is the correct management of memory. Grammar, preserved and learnt from a book, until that book becomes a Living Book of Live, afforded by Truth, learnt as a Grammar Matrix.

Unit = 1.00000
A = 1.13701
B = 0.46591
C = 0.55764
D = 0.67110
R = 0.39327

Alebraic names equated to specific arithmetic names.

Each ray given a different color.

The Algebraic name predicts any result it is used for. See if you can find any point aloong the horizonal line which does not produce equal results. I have never found oune.

$$\frac{A \cdot B \cdot D}{(A \cdot B + A \cdot C) - B \cdot C} - R = 0.00000$$

R
B
C
D
A

Results in Green.

All three Grammar Systems, Arithmetic, Algebra, and the Geometry agree on the same intelligible data and its manipulation.

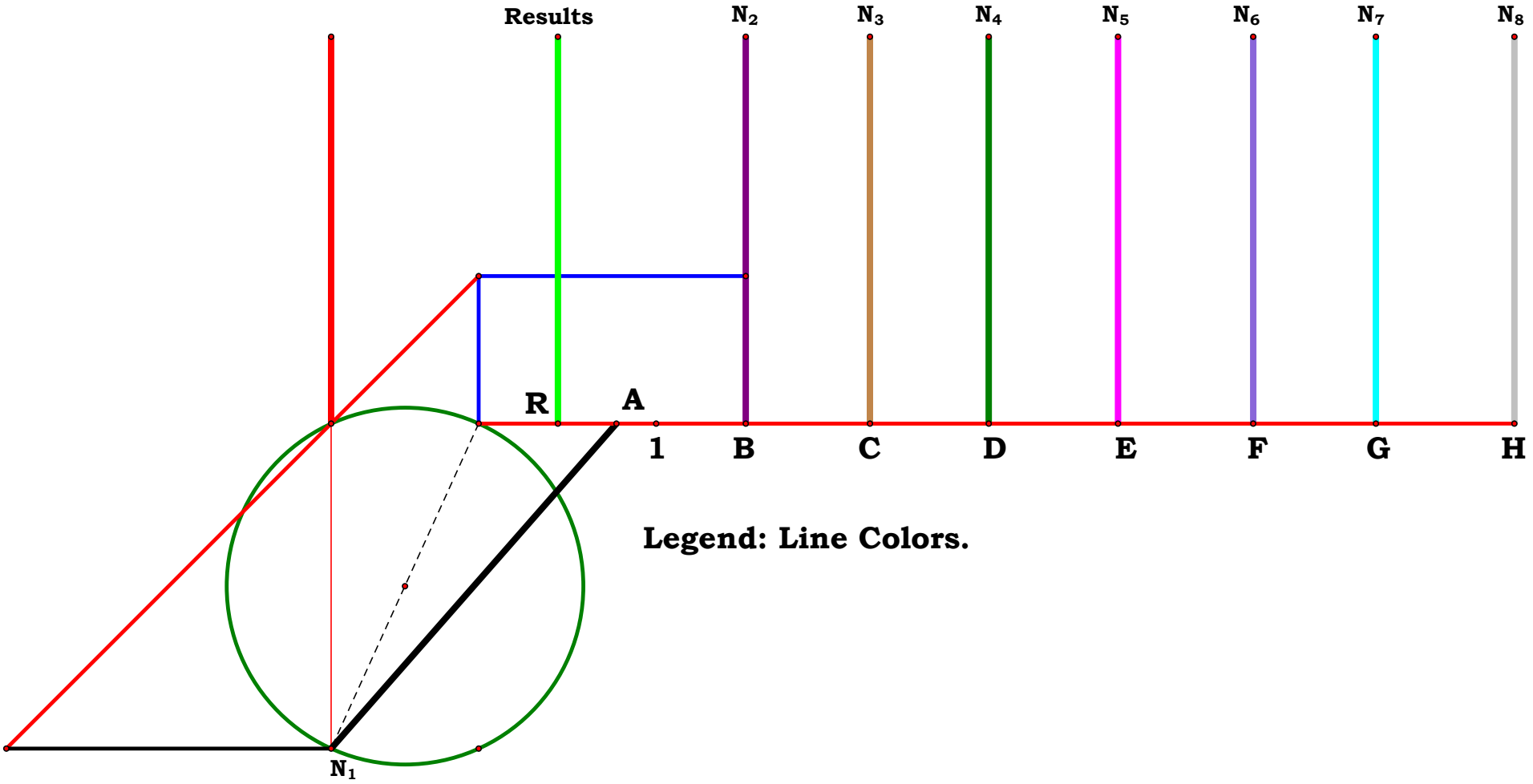
Path in blue, or in a rays native color.

How is it, that when a figure is correctly drawn and exampled, one will never find the BS spoken of by the Einstein's of the world? Why do people perefer to repeat the words of crack pots instead of what the figures show them?

P_1
P_2
P_3

Points labled in order of assertion.

During the history of mathematics, many have been claimed to have been experts in it; why is it these experts could not dcmonstrate the math in a simple unified form?


Results
N2
N3
N4
N5
N6
N7
N8
R
A
1
B
C
D
E
F
G
H
N1
Legend: Line Colors.

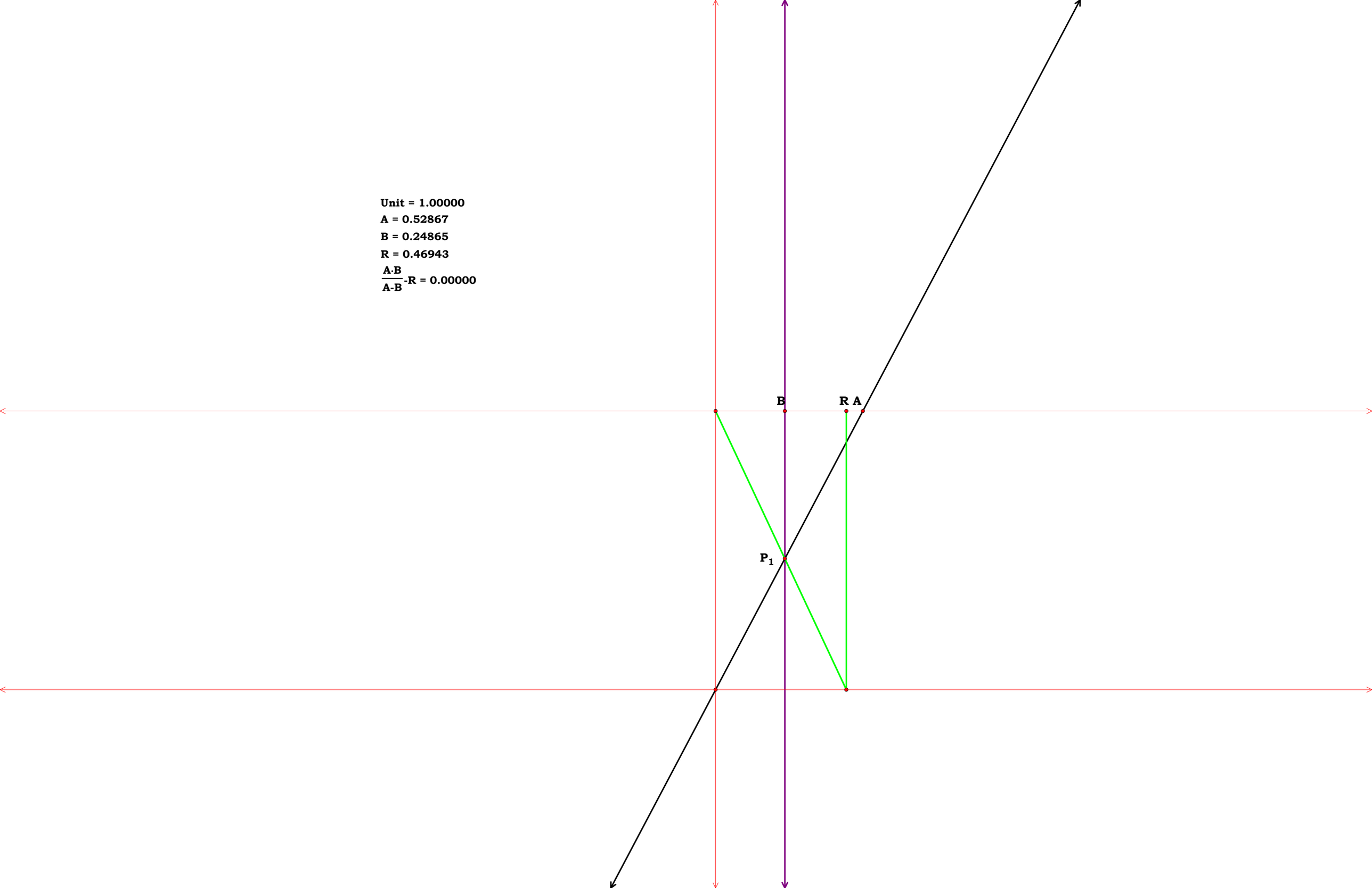
Unit = 1.00000

A = 0.52867

B = 0.24865

R = 0.46943

$$\frac{A \cdot B}{A - B} - R = 0.00000$$



Unit = 1.00000

A = 0.76766

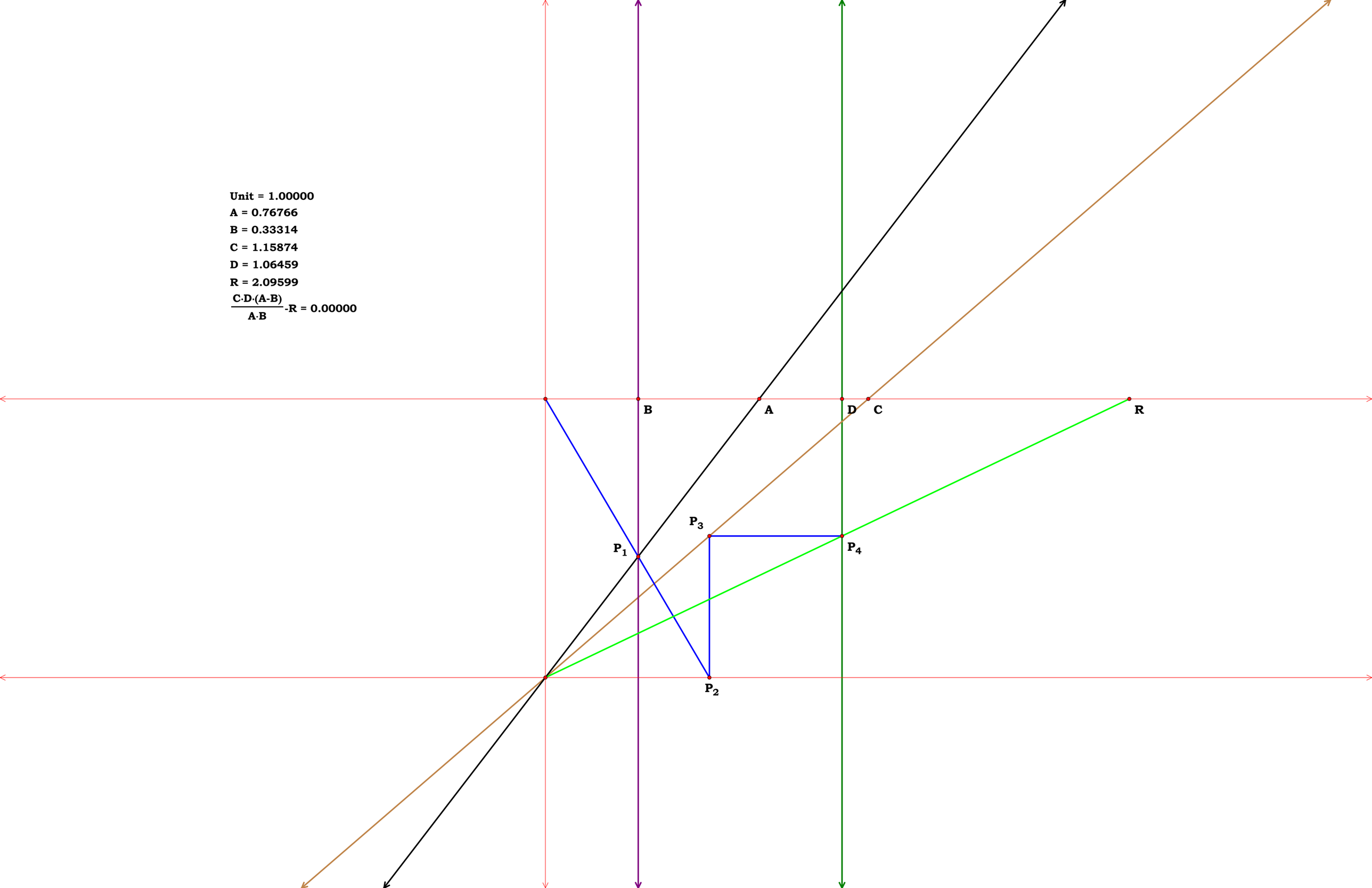
B = 0.33314

C = 1.15874

D = 1.06459

R = 2.09599

$\frac{C \cdot D \cdot (A-B)}{A \cdot B} - R = 0.00000$



Unit = 1.00000

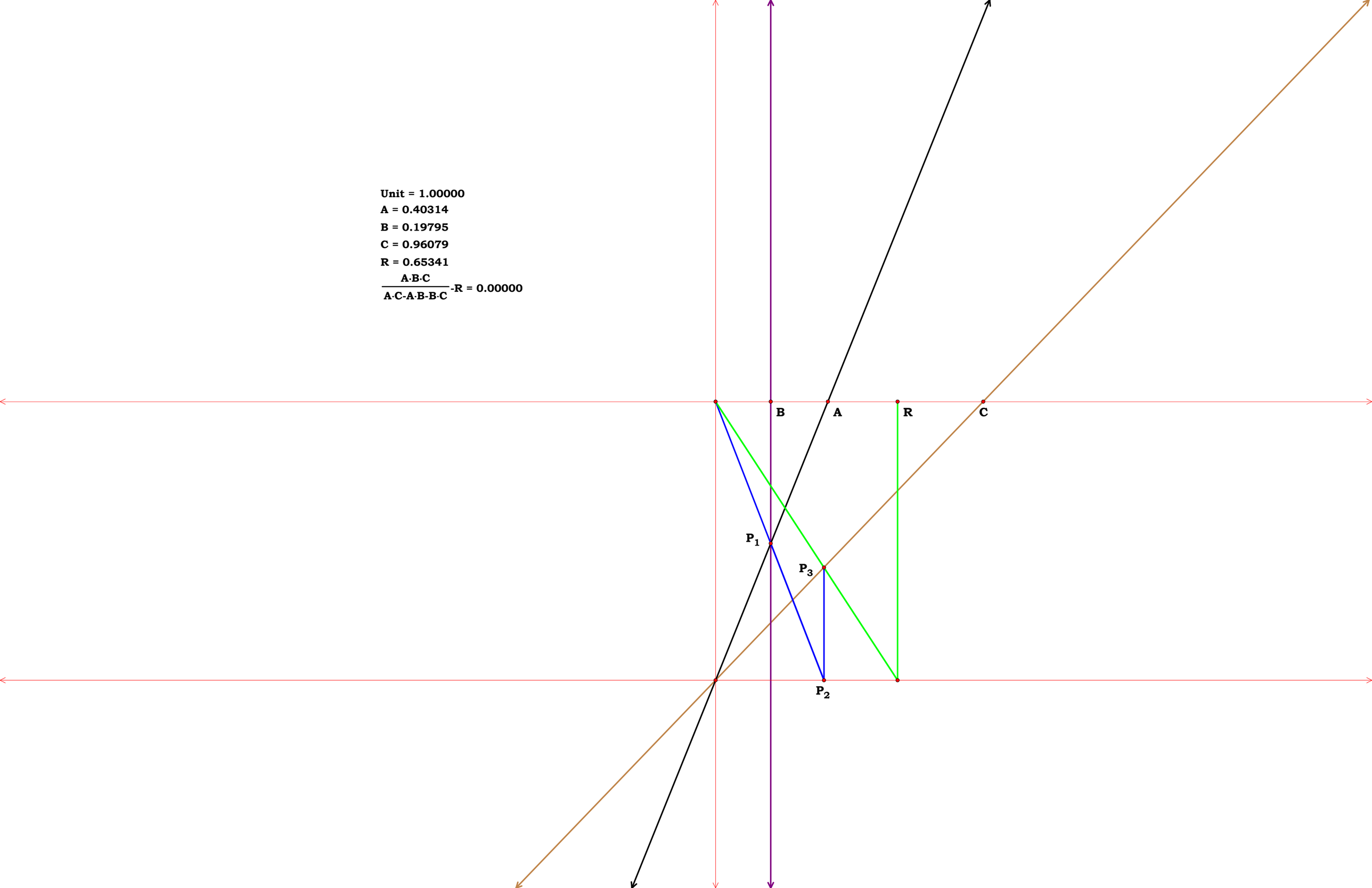
A = 0.40314

B = 0.19795

C = 0.96079

R = 0.65341

$$\frac{A \cdot B \cdot C}{A \cdot C - A \cdot B - B \cdot C} - R = 0.00000$$



Unit = 1.00000

A = 0.46108

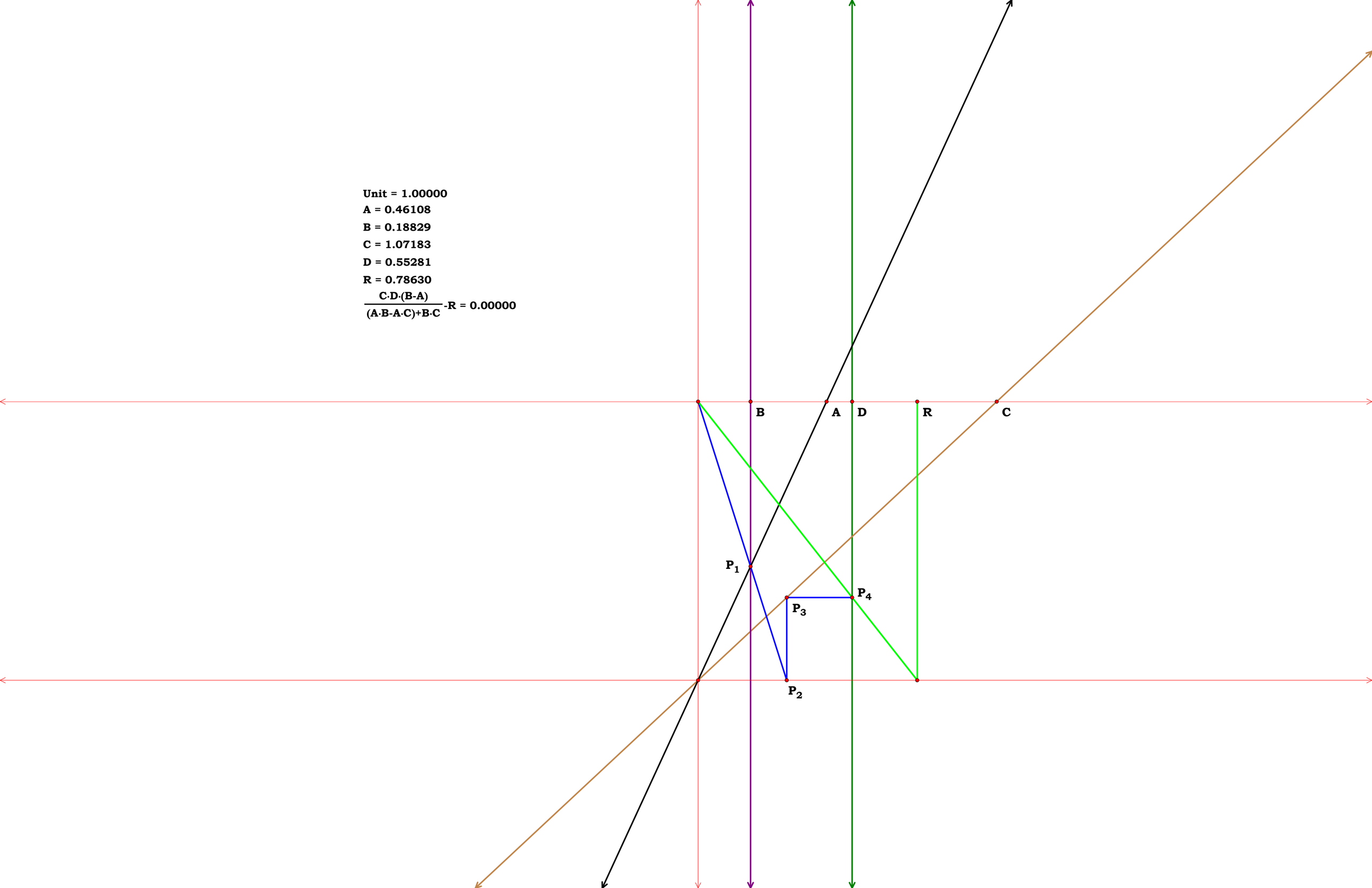
B = 0.18829

C = 1.07183

D = 0.55281

R = 0.78630

$$\frac{C\cdot D\cdot(B-A)}{(A\cdot B-A\cdot C)+B\cdot C}-R = 0.00000$$



Unit = 1.00000

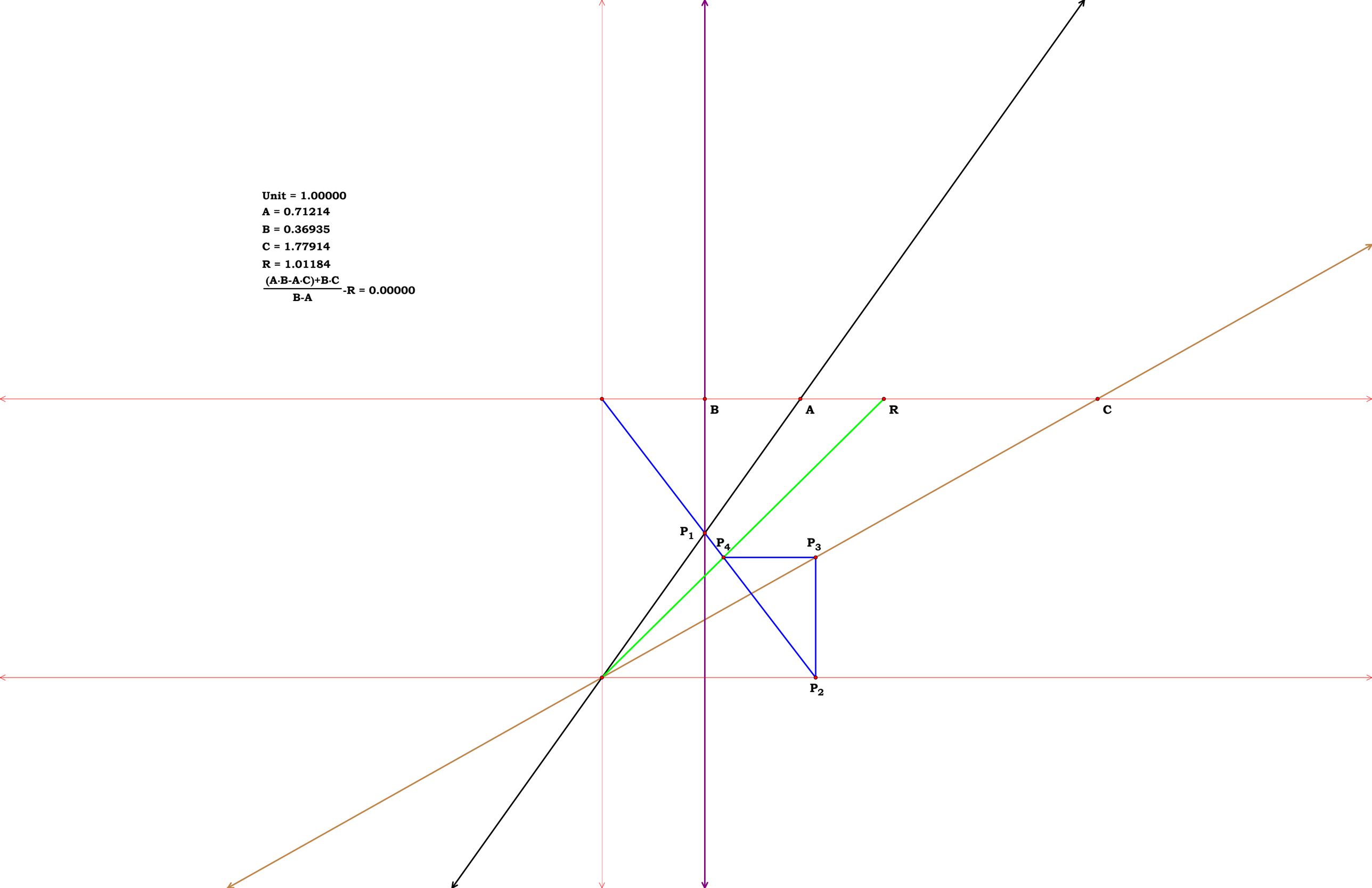
A = 0.71214

B = 0.36935

C = 1.77914

R = 1.01184

$$\frac{(A\cdot B-A\cdot C)+B\cdot C}{B-A}-R = 0.00000$$



Unit = 1.00000

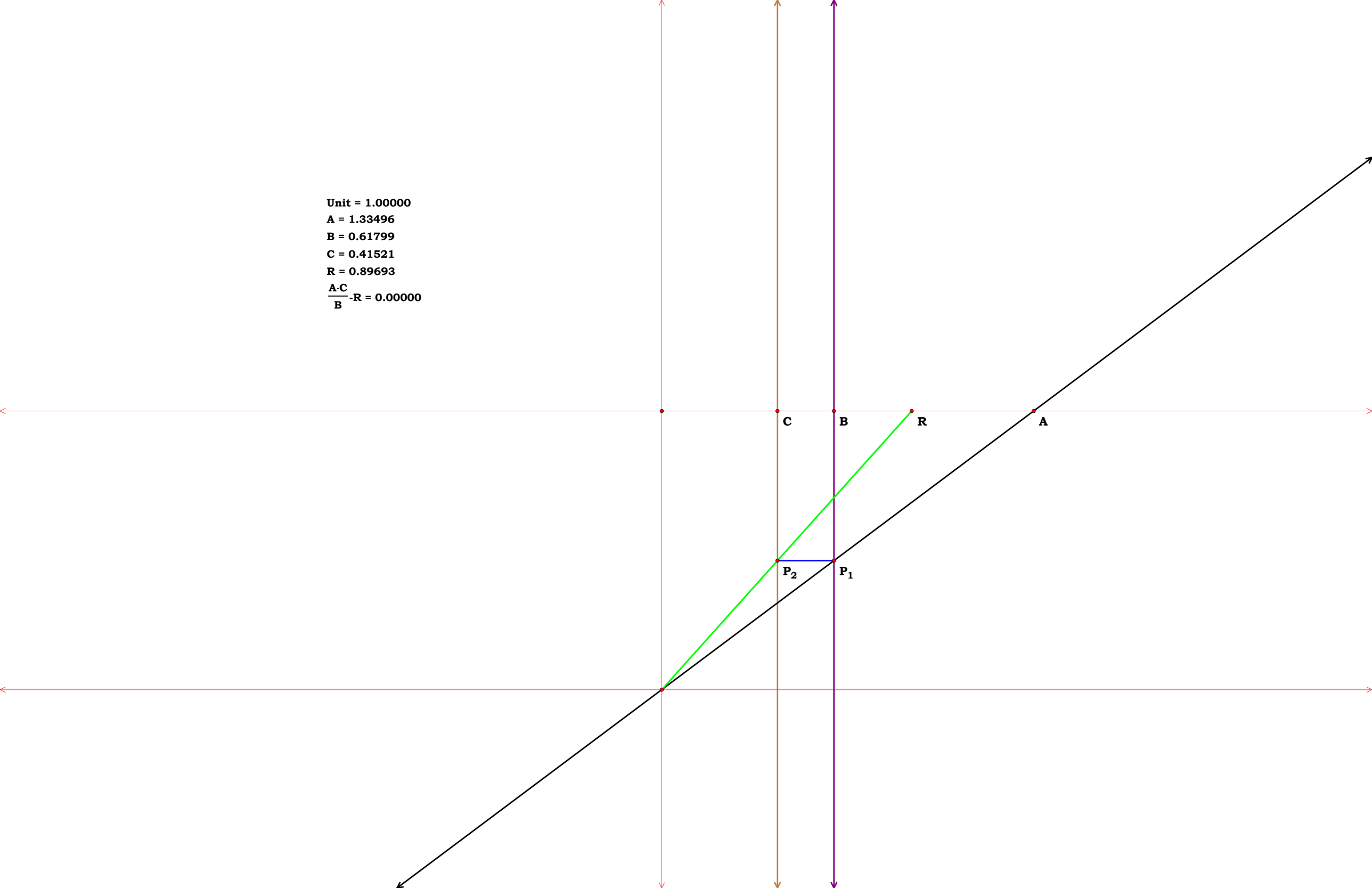
A = 1.33496

B = 0.61799

C = 0.41521

R = 0.89693

$\frac{A \cdot C}{B} - R = 0.00000$



Unit = 1.00000

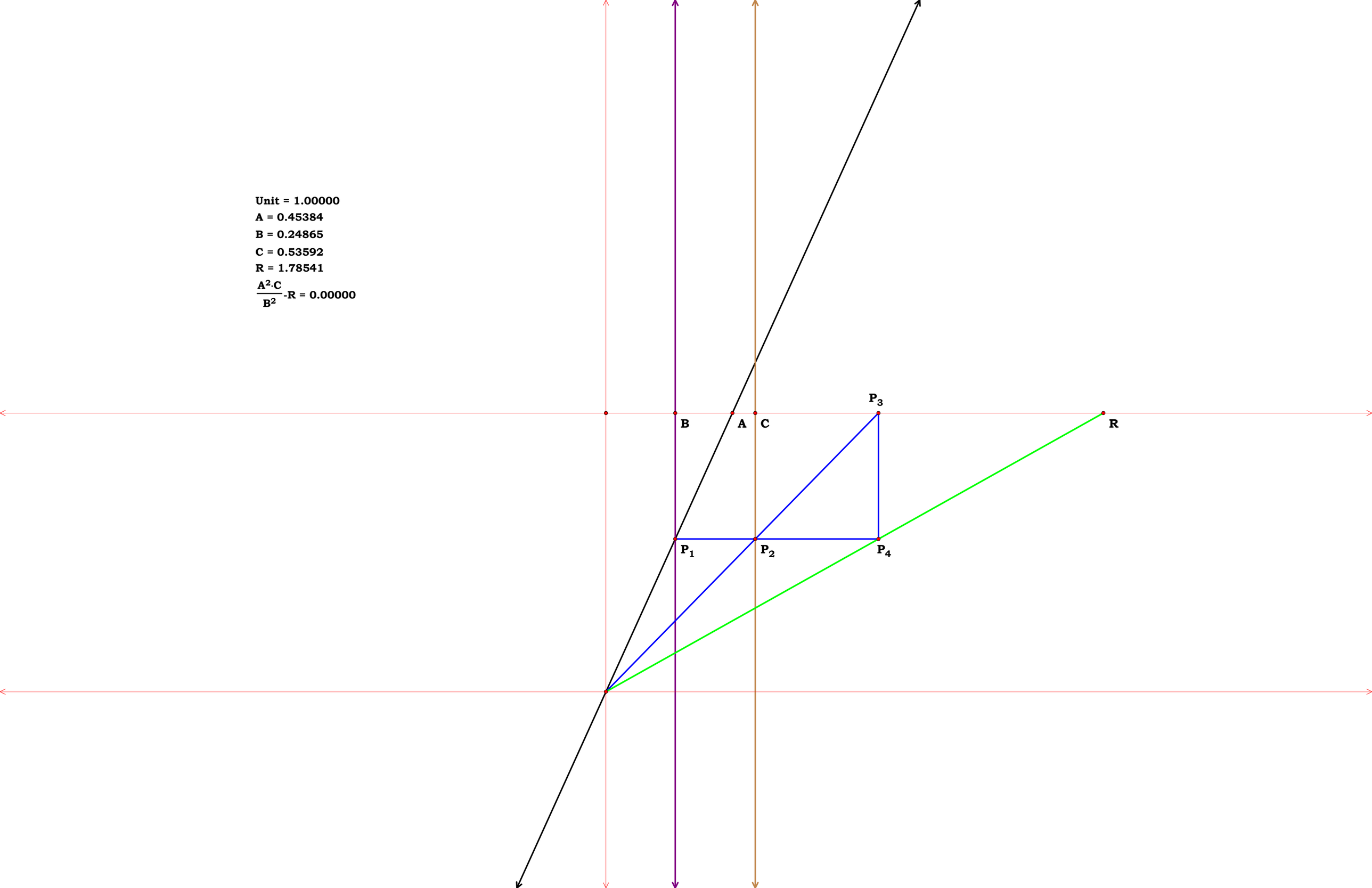
A = 0.45384

B = 0.24865

C = 0.53592

R = 1.78541

$\frac{A^2 \cdot C}{B^2} - R = 0.00000$



Unit = 1.00000

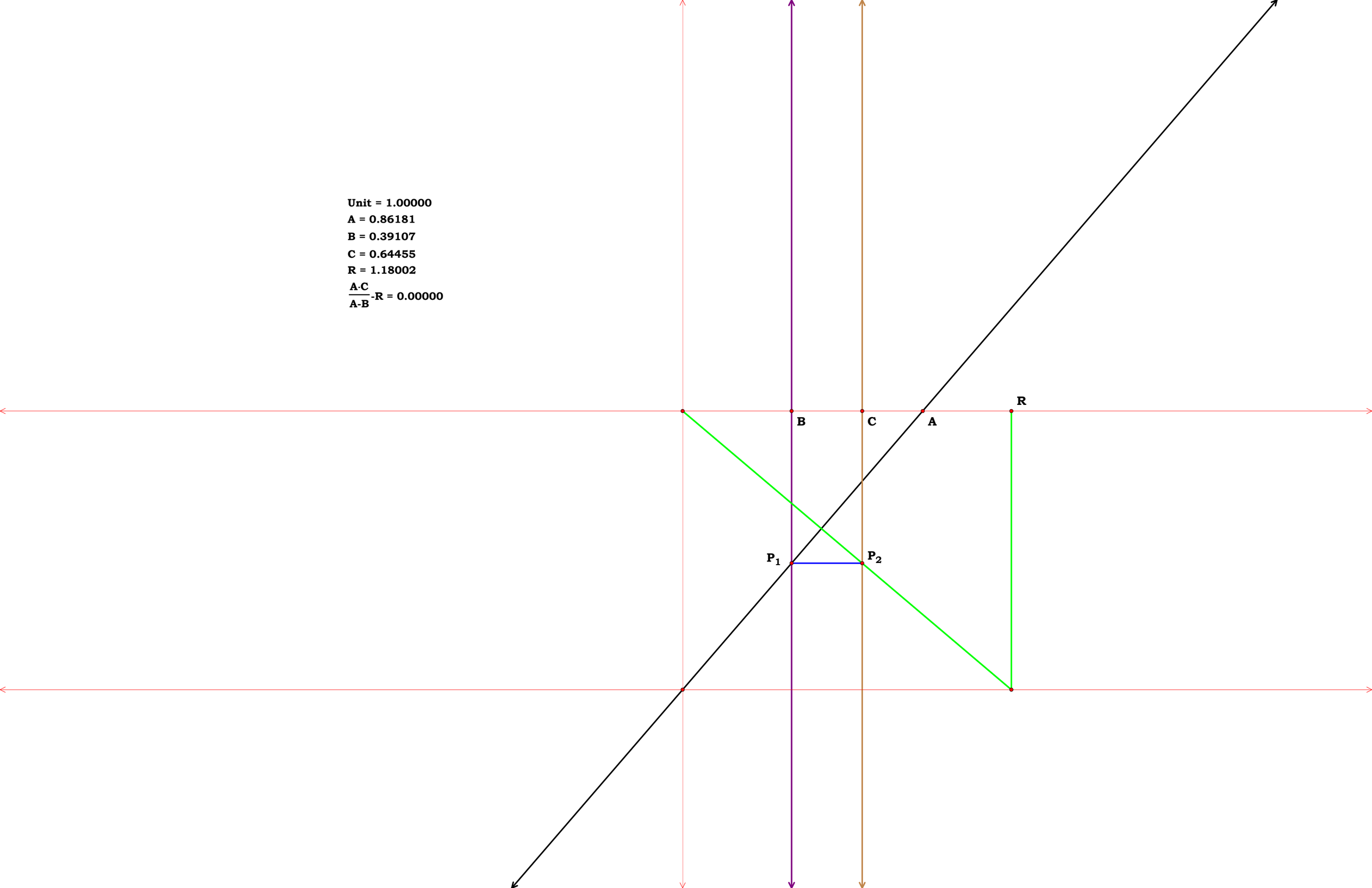
A = 0.86181

B = 0.39107

C = 0.64455

R = 1.18002

$\frac{A \cdot C}{A-B} - R = 0.00000$



Unit = 1.00000

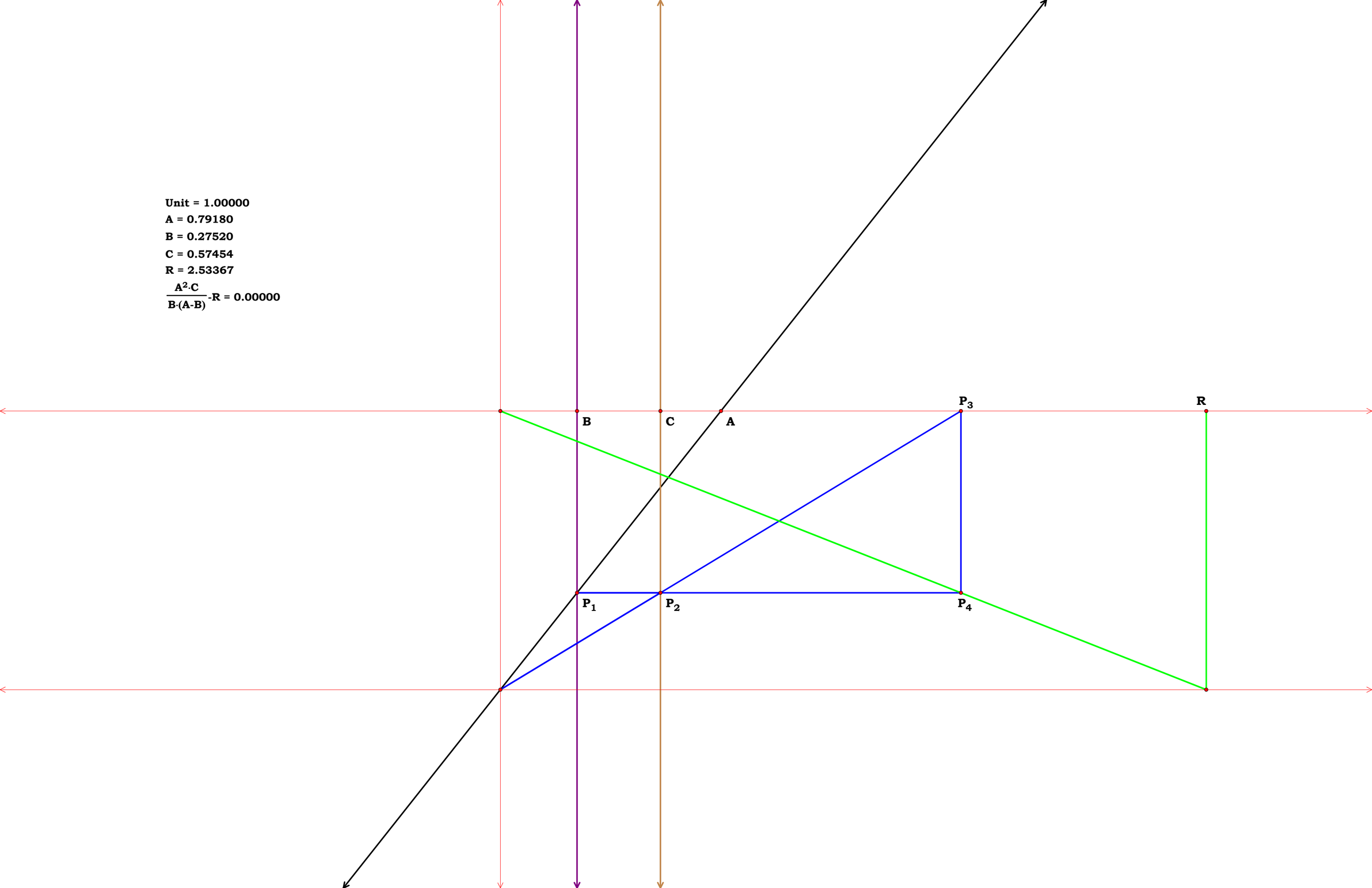
A = 0.79180

B = 0.27520

C = 0.57454

R = 2.53367

$\frac{A^2 \cdot C}{B \cdot (A-B)} - R = 0.00000$



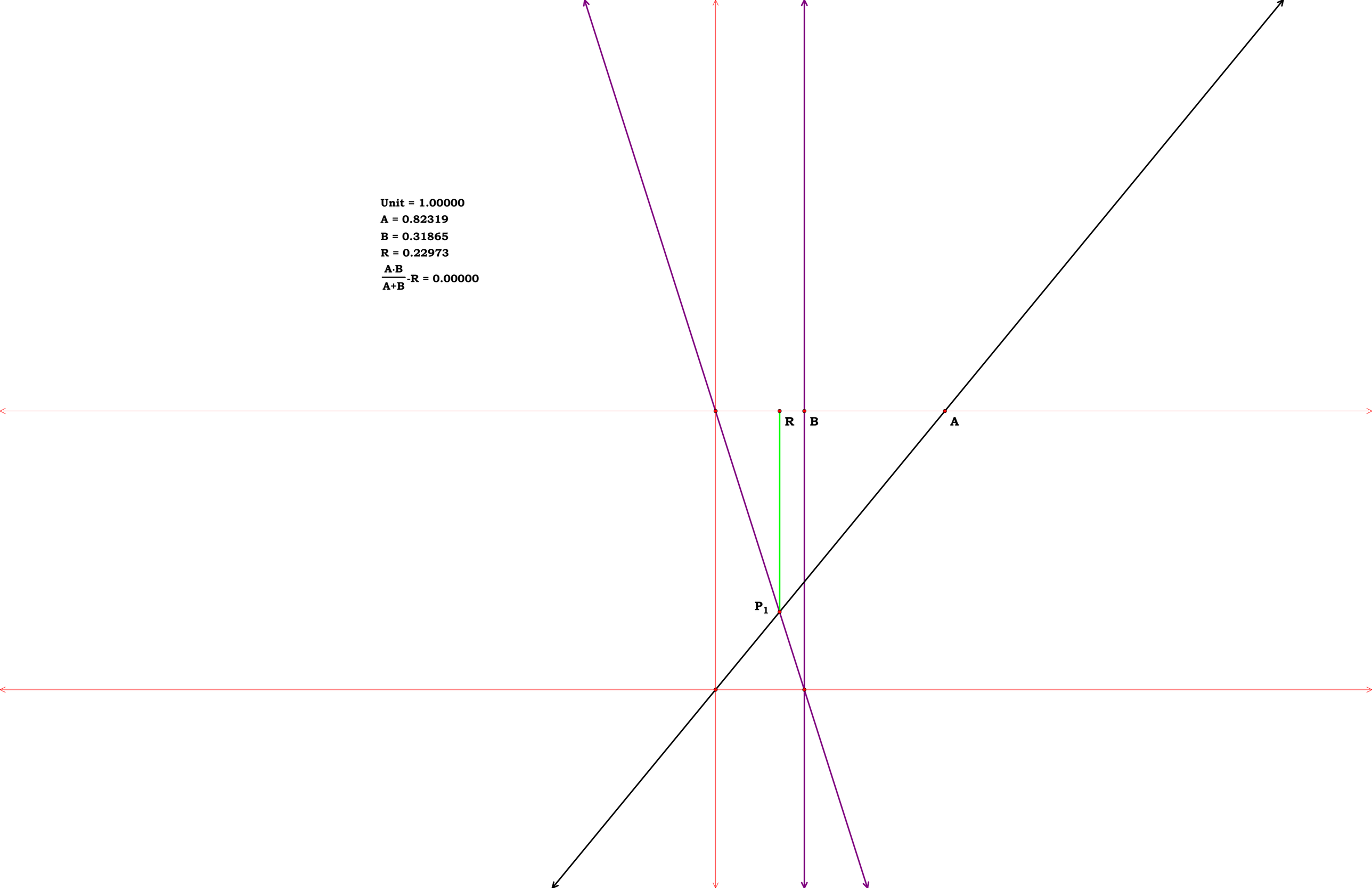
Unit = 1.00000

A = 0.82319

B = 0.31865

R = 0.22973

$\frac{A \cdot B}{A+B} - R = 0.00000$



Unit = 1.00000

A = 0.77491

B = 0.99458

C = 1.28910

R = 0.32556

$$\frac{A \cdot B \cdot C}{A \cdot B + A \cdot C + B \cdot C} - R = 0.00000$$

R

P_2

A

B

C

P_3

P_1

Unit = 1.00000

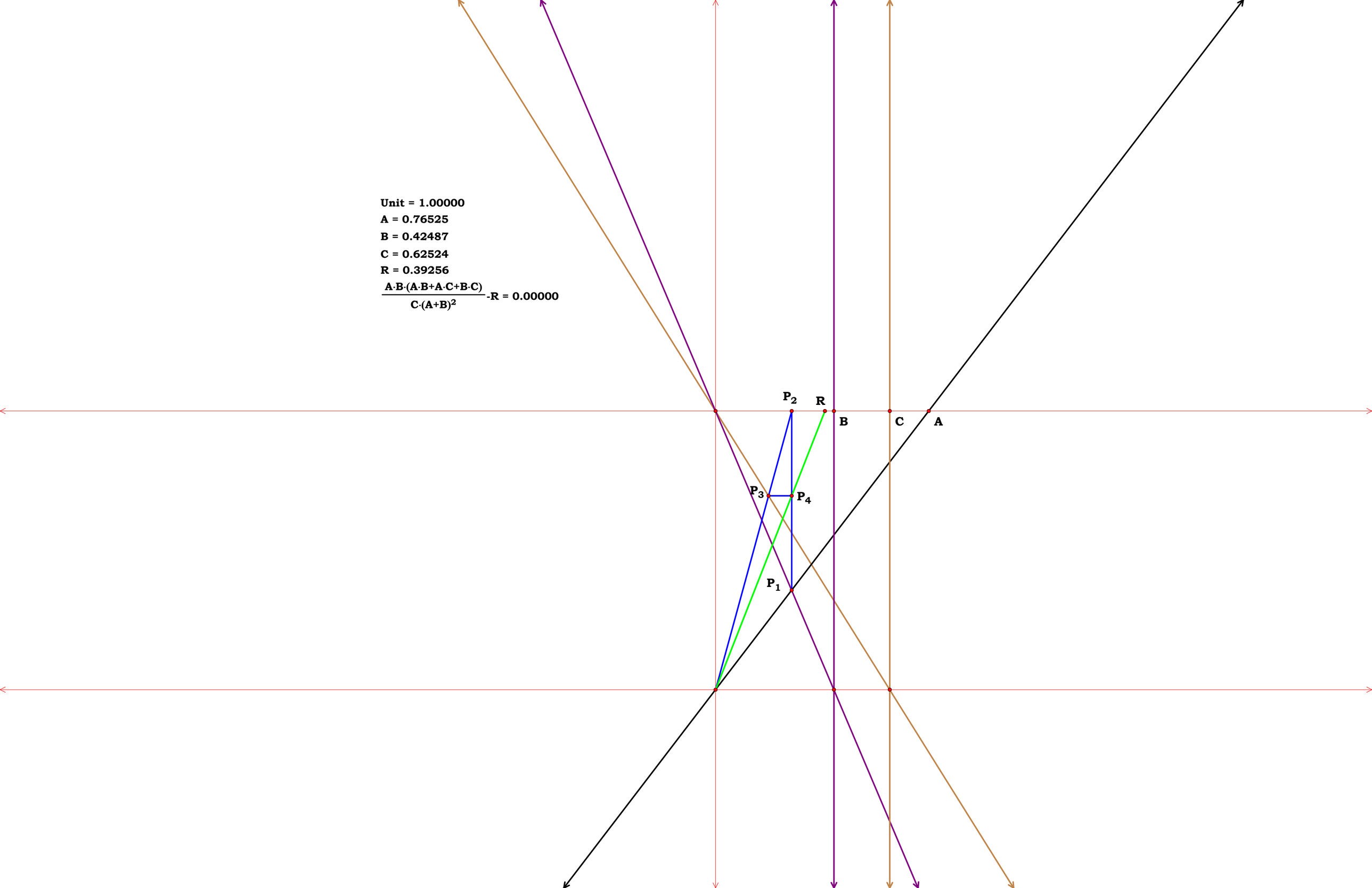
A = 0.76525

B = 0.42487

C = 0.62524

R = 0.39256

$$\frac{A\cdot B\cdot(A\cdot B+A\cdot C+B\cdot C)}{C\cdot(A+B)^2}-R = 0.00000$$



Unit = 1.00000

A = 0.77008

B = 0.27761

C = 0.56006

D = 1.07666

R = 1.46893

$$\frac{A\cdot D\cdot(B+C)+B\cdot C\cdot D}{C\cdot(A+B)}-R = 0.00000$$

P_2 B C A D R

P_3 P_4

P_1

Unit = 1.00000

A = 1.32772

B = 0.44660

C = 0.68800

R = 1.02219

$$\frac{A \cdot B + C \cdot (A+B)}{A+B} - R = 0.00000$$

P_2 B C R A

P_3 P_4

P_1

Unit = 1.00000

A = 0.95837

B = 0.44660

C = 0.62282

D = 1.19978

R = 0.80569

$$\frac{C \cdot D \cdot (A+B)}{A \cdot B + C \cdot (A+B)} - R = 0.00000$$

P_2 B C R A D

P_3

P_4

P_1

Unit = 1.00000

A = 1.09356

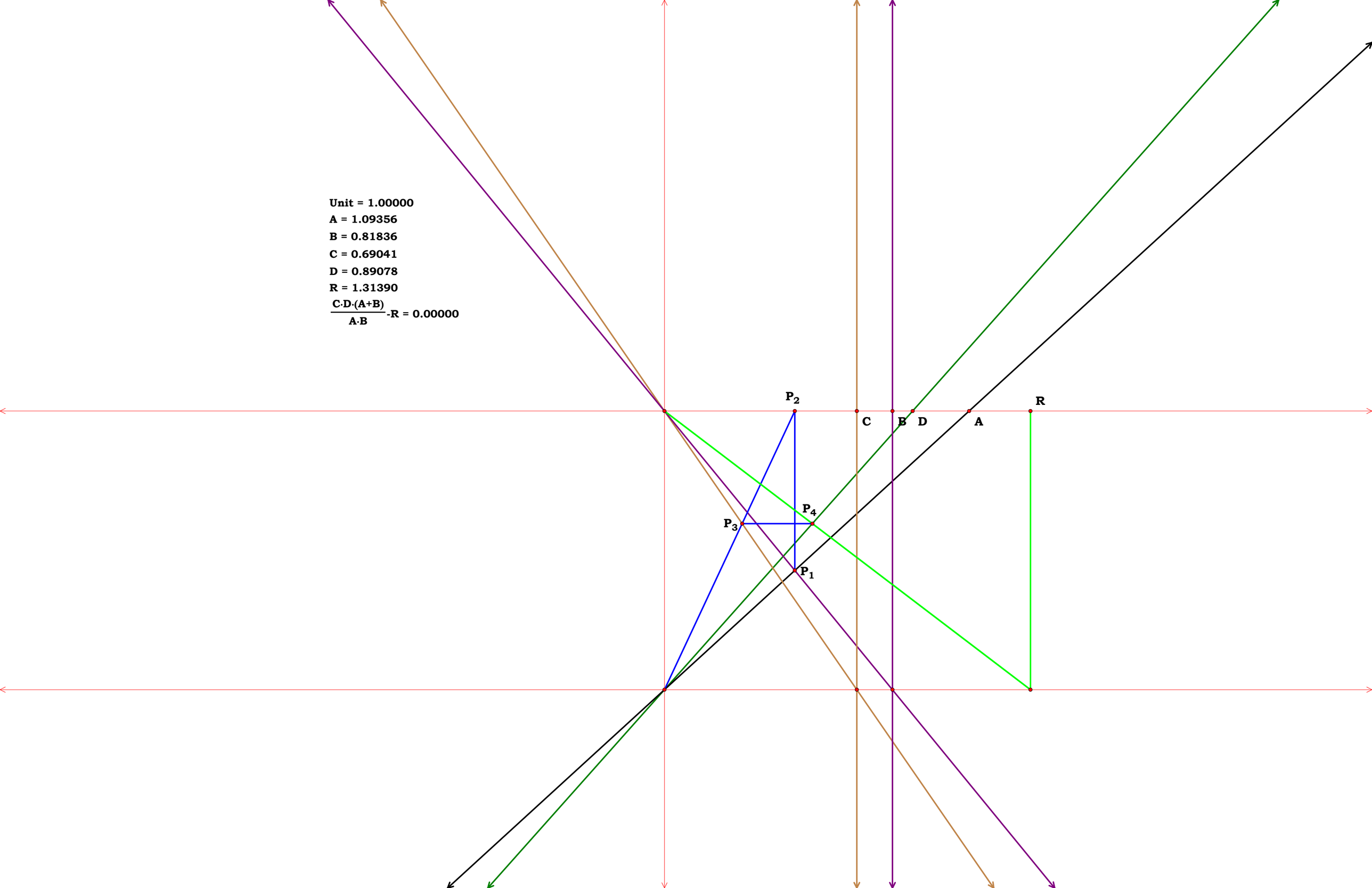
B = 0.81836

C = 0.69041

D = 0.89078

R = 1.31390

$\frac{C \cdot D \cdot (A+B)}{A \cdot B} - R = 0.00000$



Unit = 1.00000

A = 1.13701

B = 0.42487

C = 0.58420

D = 0.70731

R = 2.04328

$\frac{A \cdot B \cdot D + C \cdot D \cdot (A+B)}{A \cdot B} - R = 0.00000$

P_2

B

C

D

A

R

P_3

P_4

P_1

Unit = 1.00000

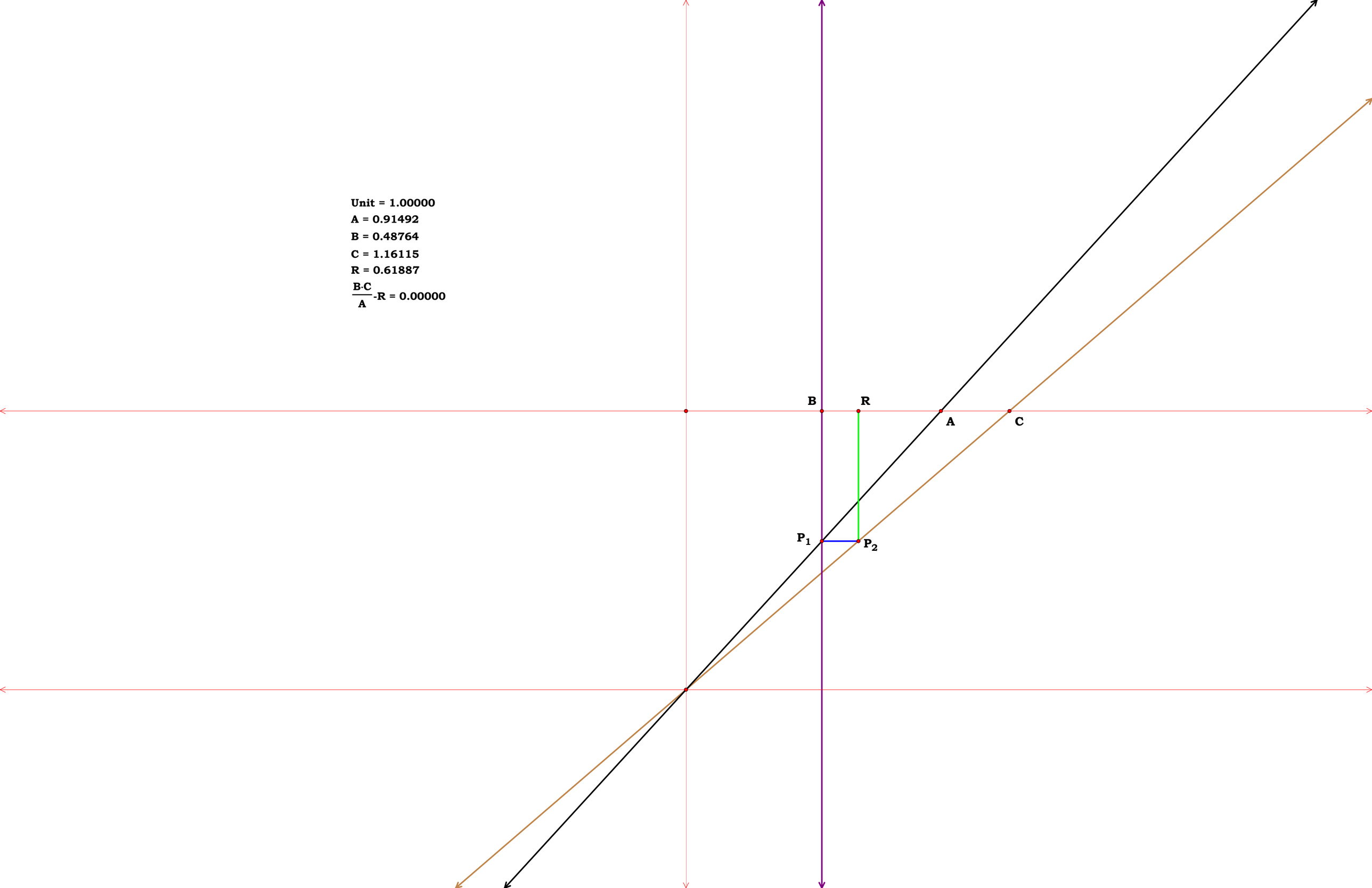
A = 0.91492

B = 0.48764

C = 1.16115

R = 0.61887

$\frac{B \cdot C}{A}$-R = 0.00000



Unit = 1.00000

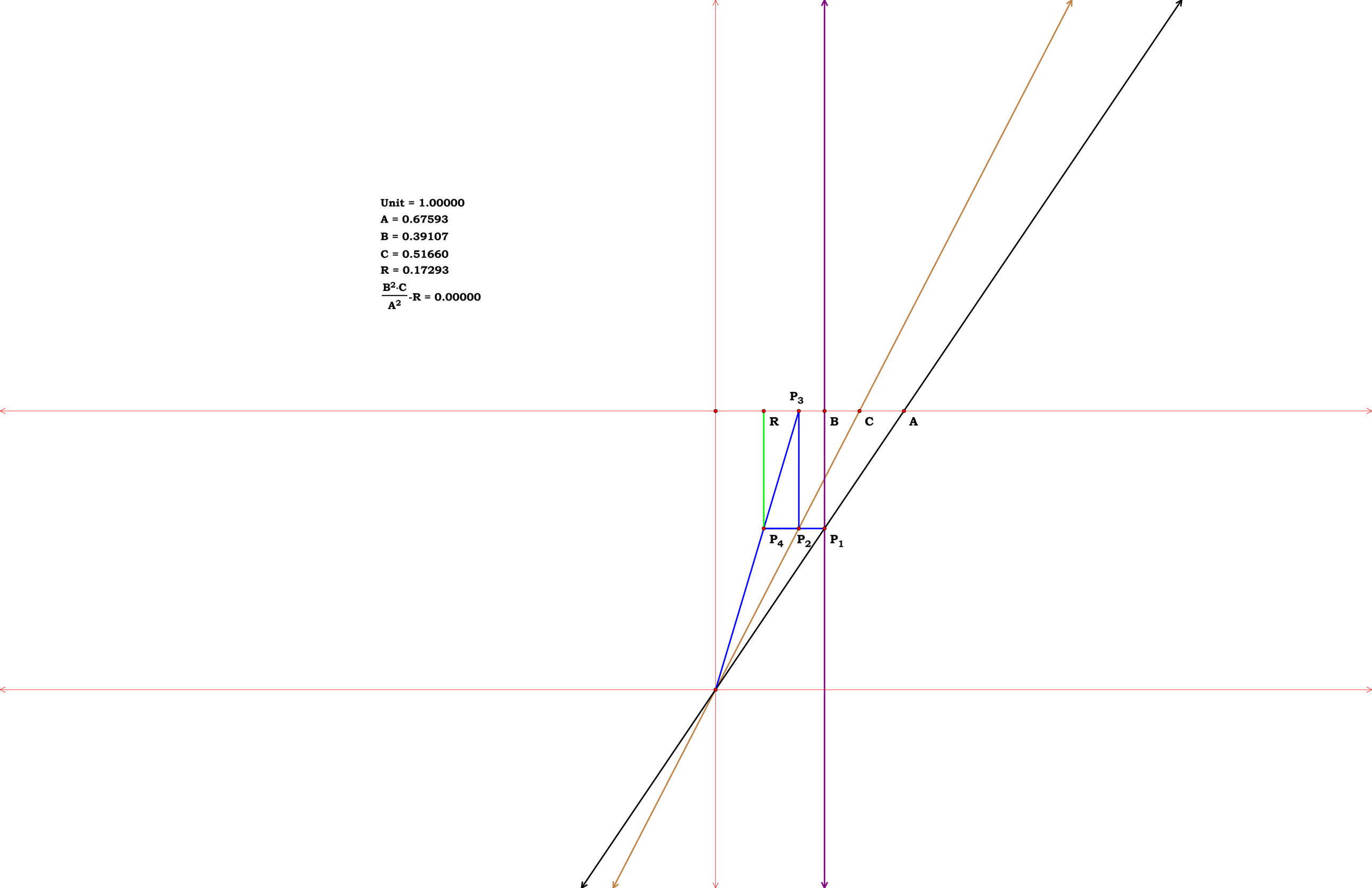
A = 0.67593

B = 0.39107

C = 0.51660

R = 0.17293

$\frac{B^2 \cdot C}{A^2} - R = 0.00000$



Unit = 1.00000

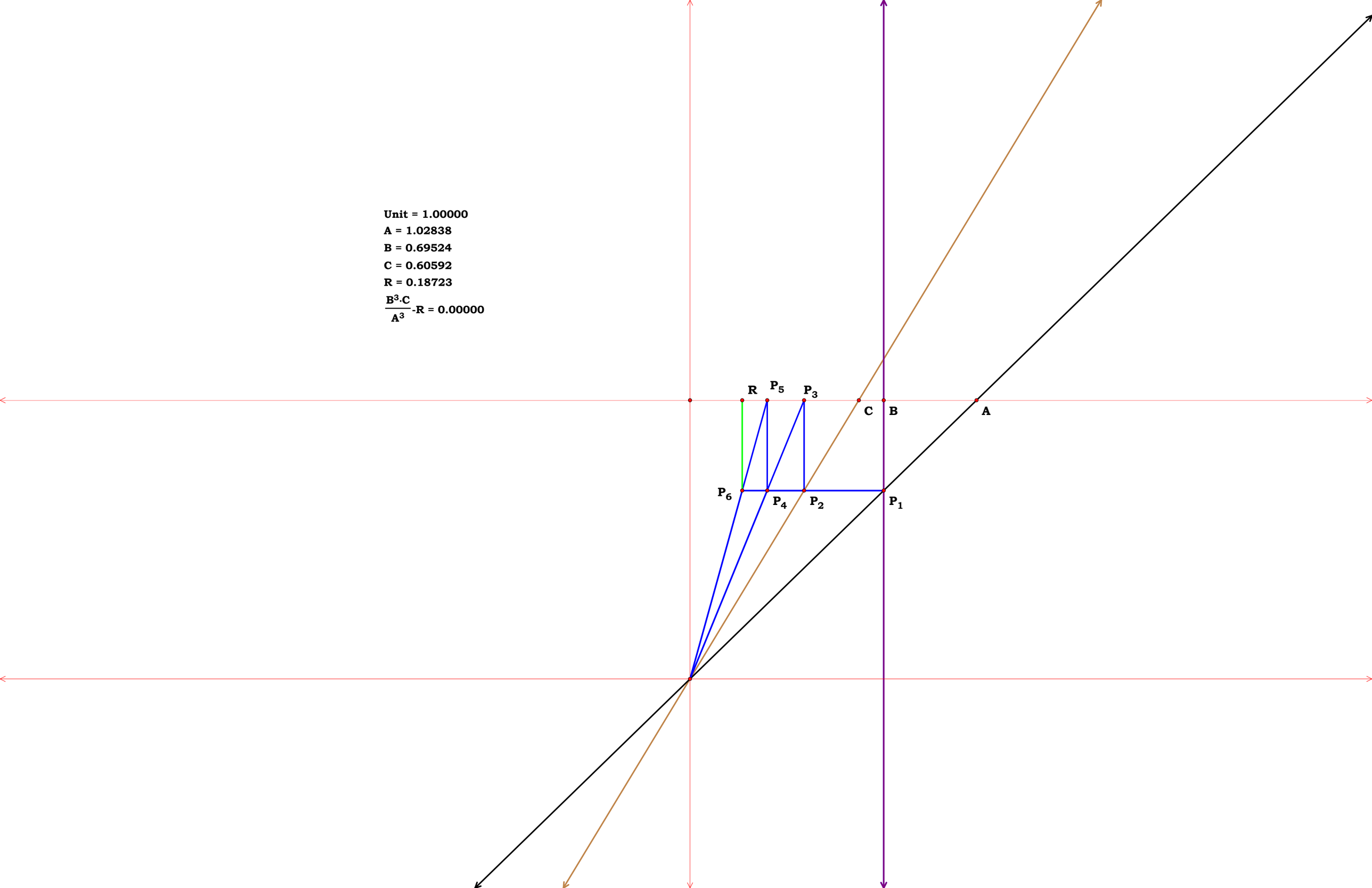
A = 1.02838

B = 0.69524

C = 0.60592

R = 0.18723

$\frac{B^3.C}{A^3}$-R = 0.00000



Unit = 1.00000

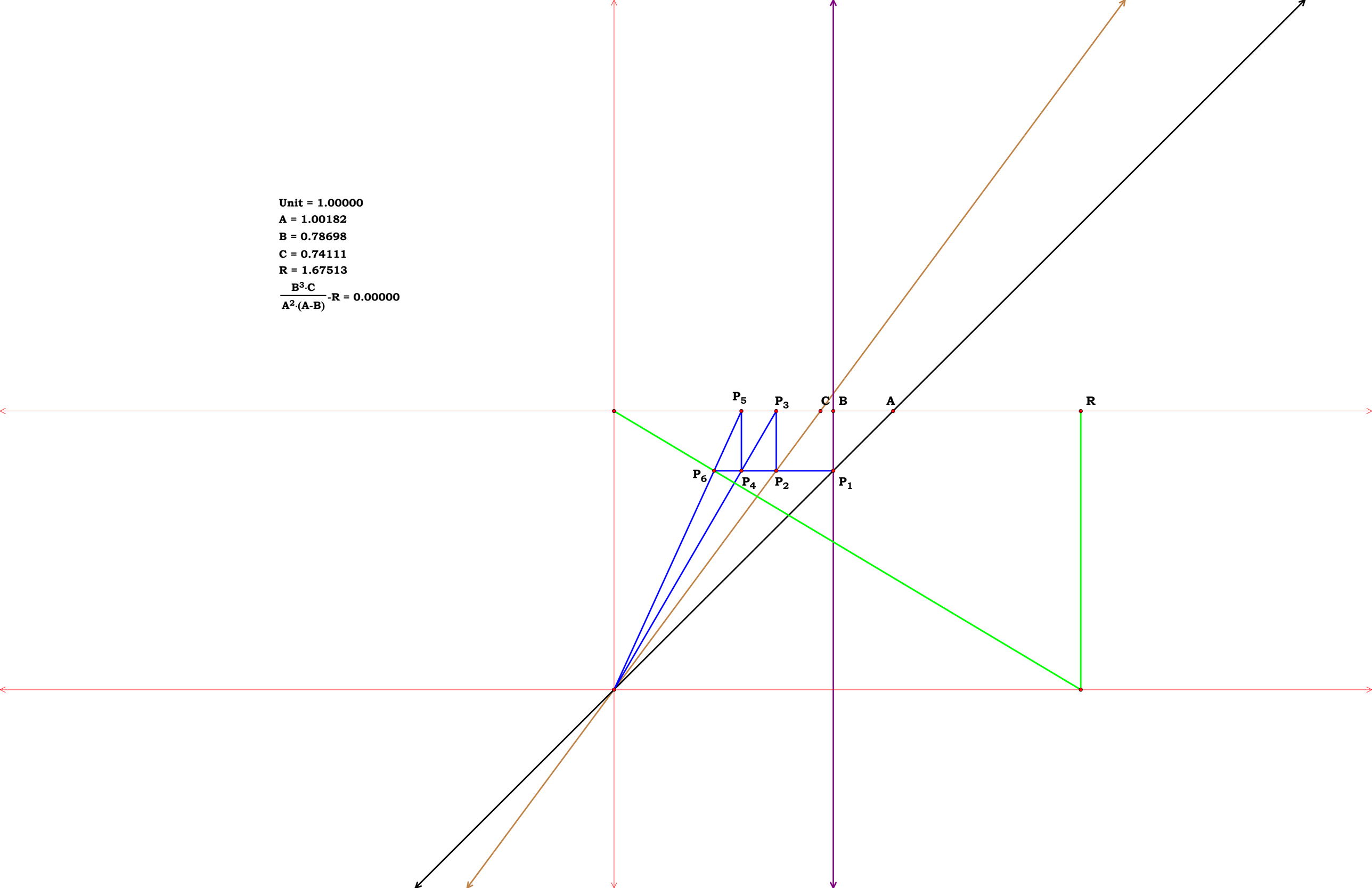
A = 1.00182

B = 0.78698

C = 0.74111

R = 1.67513

$$\frac{B^3 \cdot C}{A^2 \cdot (A-B)} - R = 0.00000$$



Unit = 1.00000

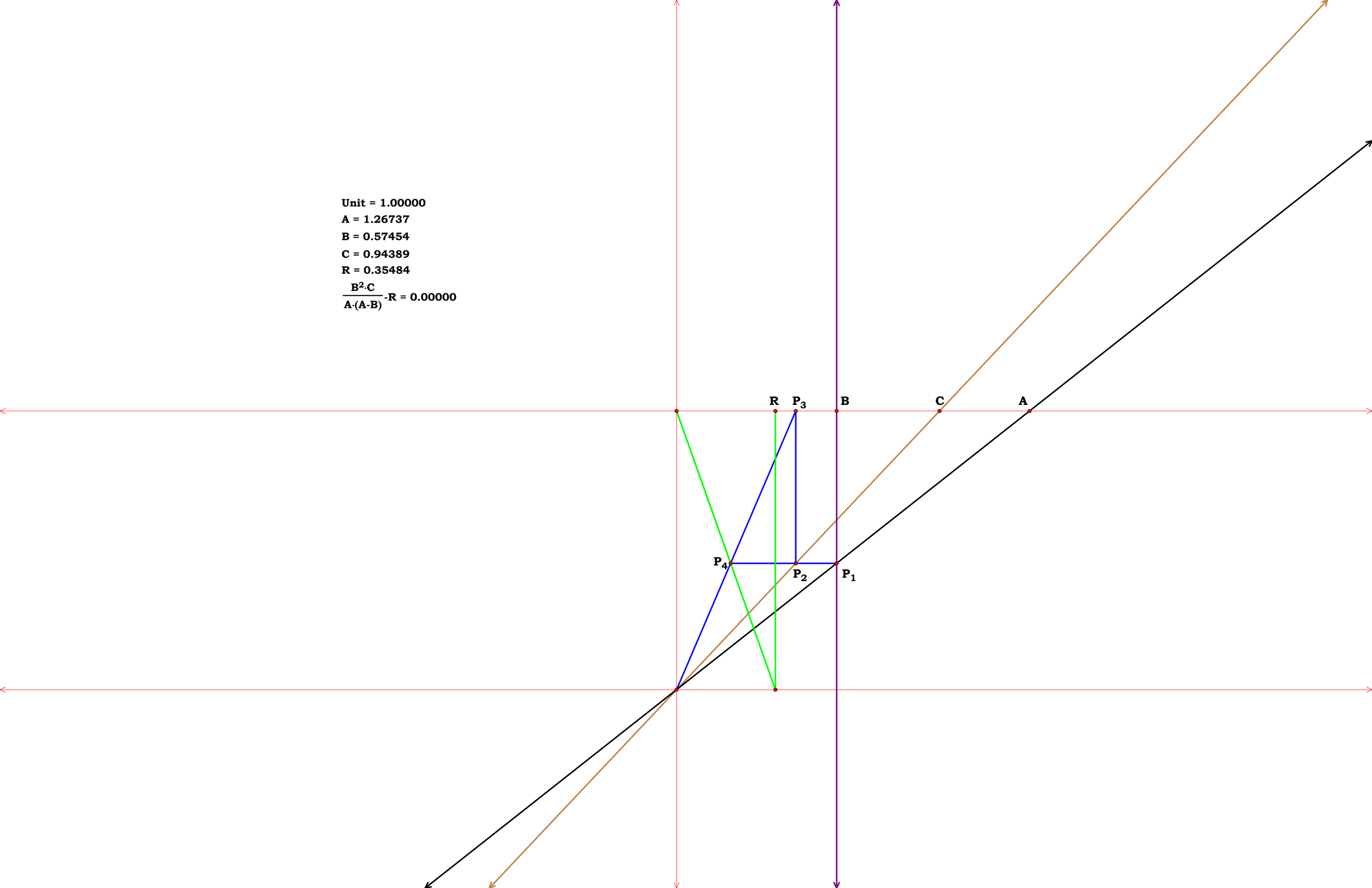
A = 1.26737

B = 0.57454

C = 0.94389

R = 0.35484

$\frac{B^2 \cdot C}{A \cdot (A-B)} - R = 0.00000$



Unit = 1.00000

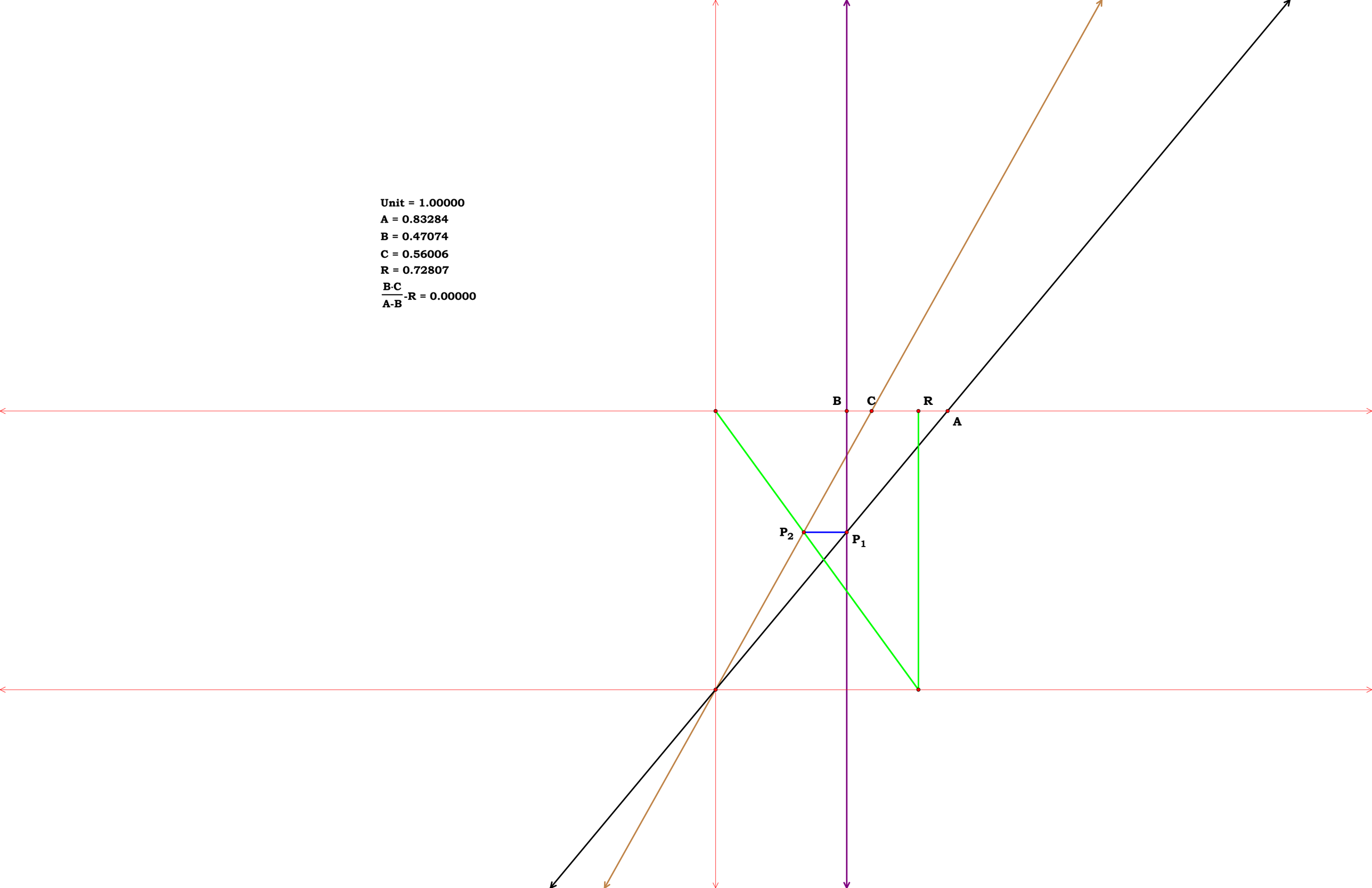
A = 0.83284

B = 0.47074

C = 0.56006

R = 0.72807

$\frac{B \cdot C}{A-B} - R = 0.00000$



Unit = 1.00000

A = 1.02838

B = 0.74352

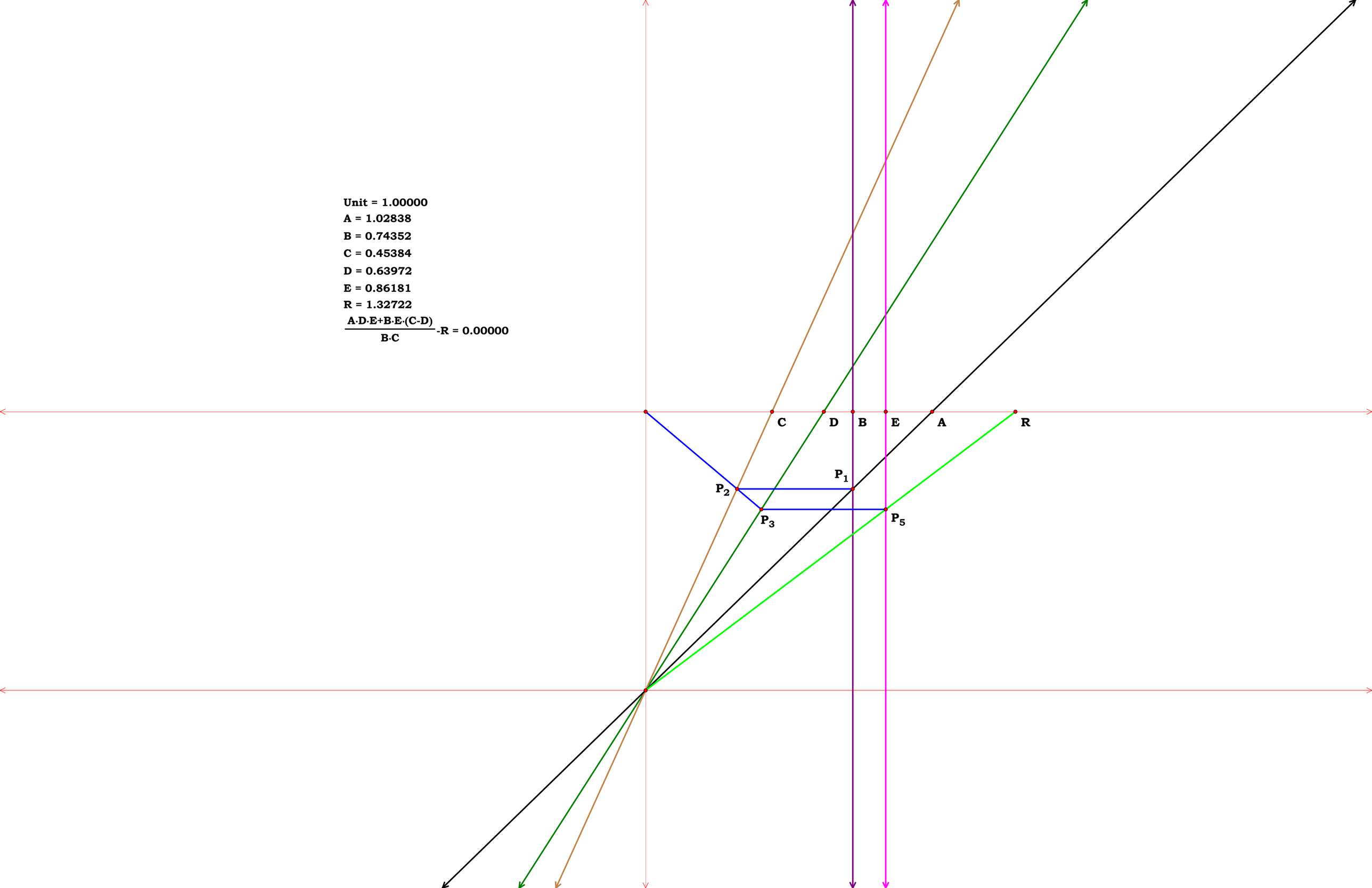
C = 0.45384

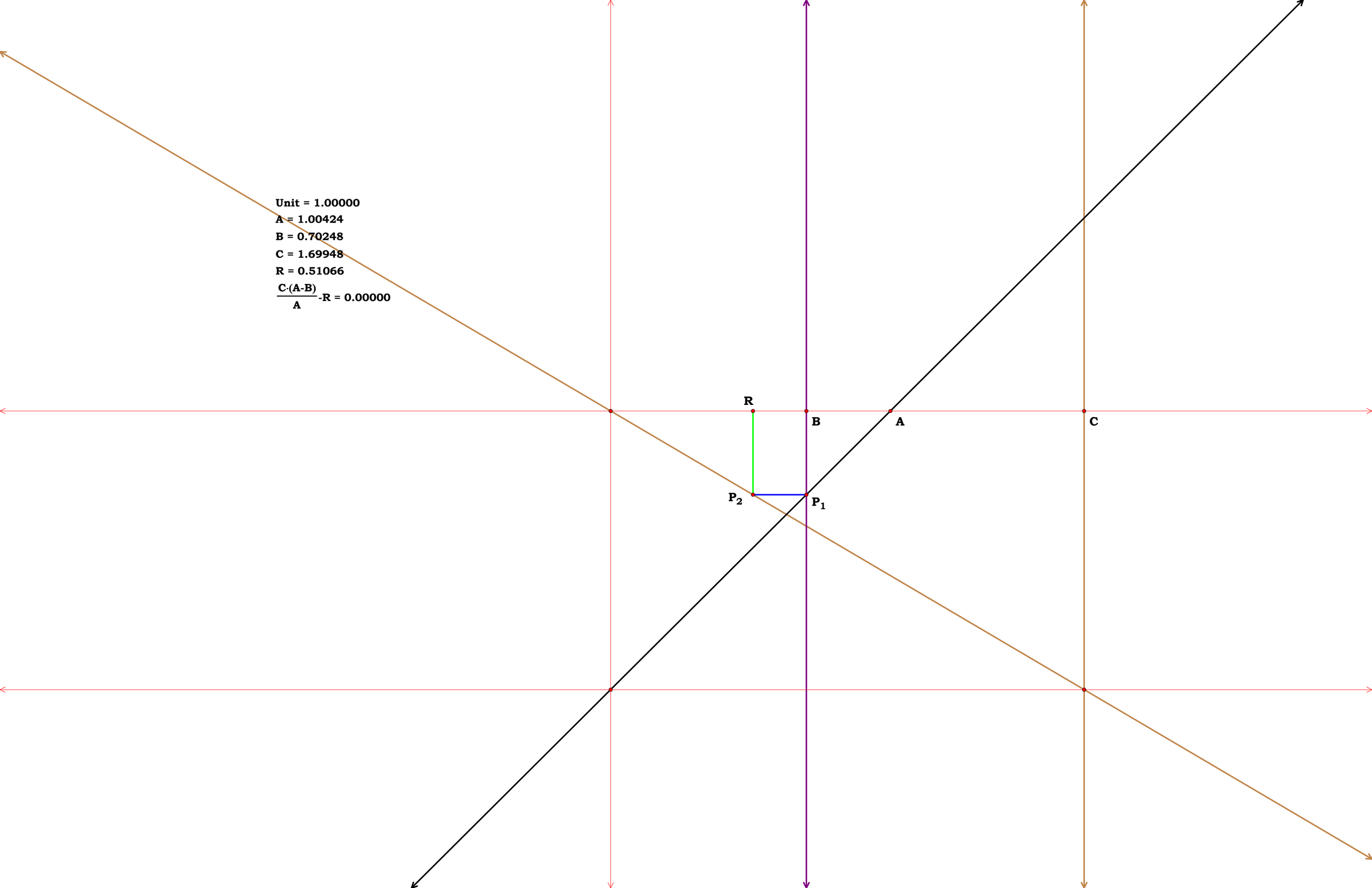
D = 0.63972

E = 0.86181

R = 1.32722

$$\frac{A \cdot D \cdot E + B \cdot E \cdot (C - D)}{B \cdot C} - R = 0.00000$$




Unit = 1.00000
A = 1.00424
B = 0.70248
C = 1.69948
R = 0.51066
$\frac{C\cdot(A-B)}{A}$-R = 0.00000
R
B
A
C
P_2
P_1

Unit = 1.00000

A = 1.55464

B = 1.12253

C = 0.91492

R = 0.35219

$\frac{C\cdot(A-B)}{B}$-R = 0.00000

R

C

B

A

P_2

P_1

Unit = 1.00000
A = 0.95837
B = 0.85940
C = 1.63672
D = 0.53350
E = 0.68559
R = 1.47828
$\frac{A \cdot E \cdot (D-C) + B \cdot C \cdot E}{C \cdot (A-B)} - R = 0.00000$

D
E
B
A
R
C
P_2
P_1
P_3
P_4

Unit = 1.00000

A = 0.97286

B = 0.72904

C = 0.55764

D = 0.70731

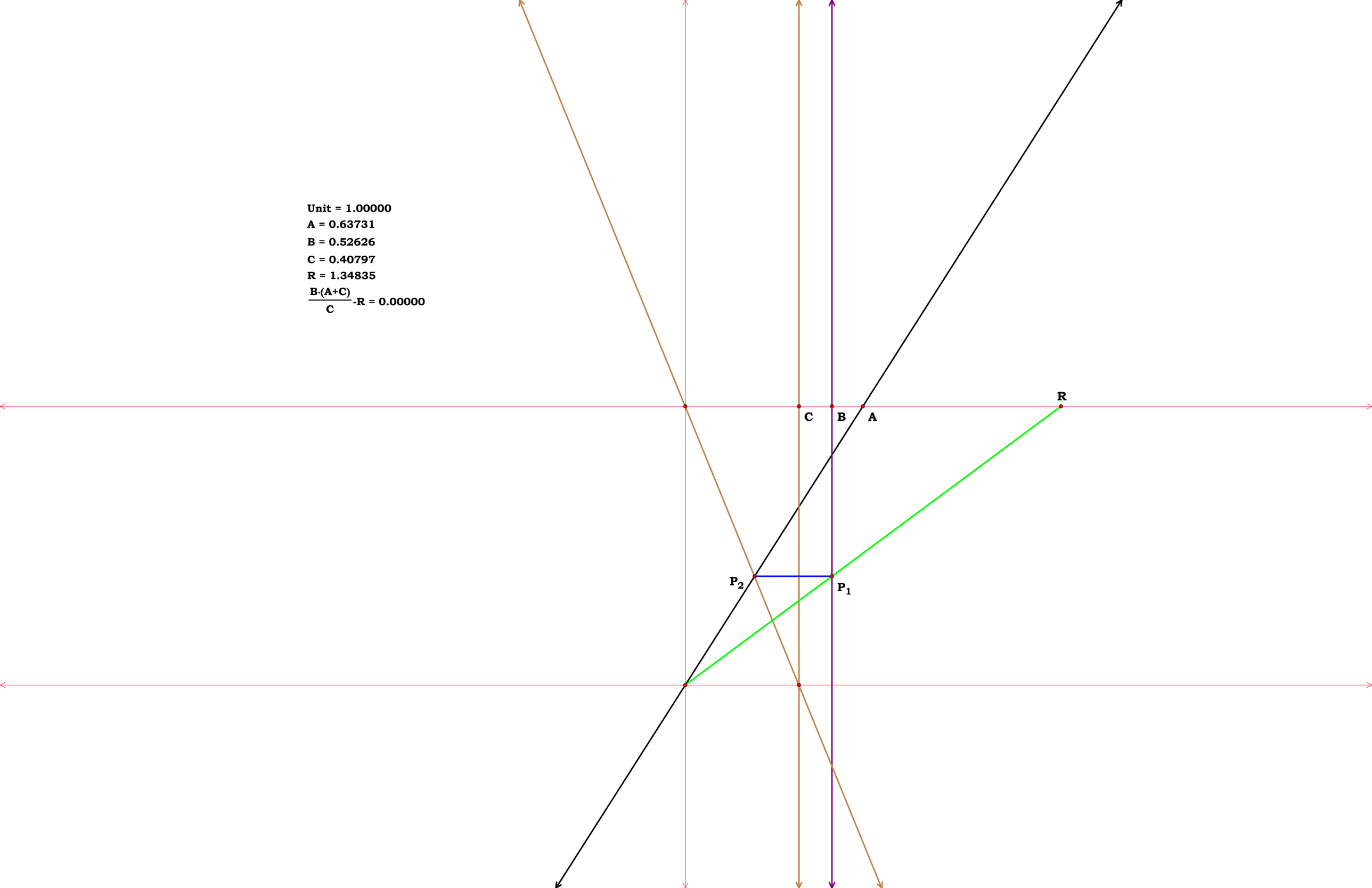
E = 0.35486

R = 1.79598

$$\frac{A \cdot D \cdot E}{A \cdot C - B \cdot C} - R = 0.00000$$

E C B A R

P_2 P_1 P_3 P_4


Unit = 1.00000
A = 0.63731
B = 0.52626
C = 0.40797
R = 1.34835
$\frac{B\cdot(A+C)}{C}$-R = 0.00000
C
B
A
R
P_2
P_1

Unit = 1.00000
A = 0.73628
B = 0.39107
C = 0.55764
D = 1.05976
E = 1.12011
R = 1.48696
$\frac{A \cdot D \cdot E}{A \cdot D - C \cdot (A - B)} - R = 0.00000$

B C A D E R

P_2 P_1 P_3 P_4

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.57695

R = 1.57420

$\frac{B\cdot(A+C)}{A}$-R = 0.00000

A

B

C

R

P_1

P_2

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 0.70731

E = 0.86181

R = 0.97167

$$\frac{B \cdot C \cdot E}{A \cdot D - B \cdot (C - D)} - R = 0.00000$$

A

B

C

D

E

R

P_1

P_2

P_3

P_4

Unit = 1.00000

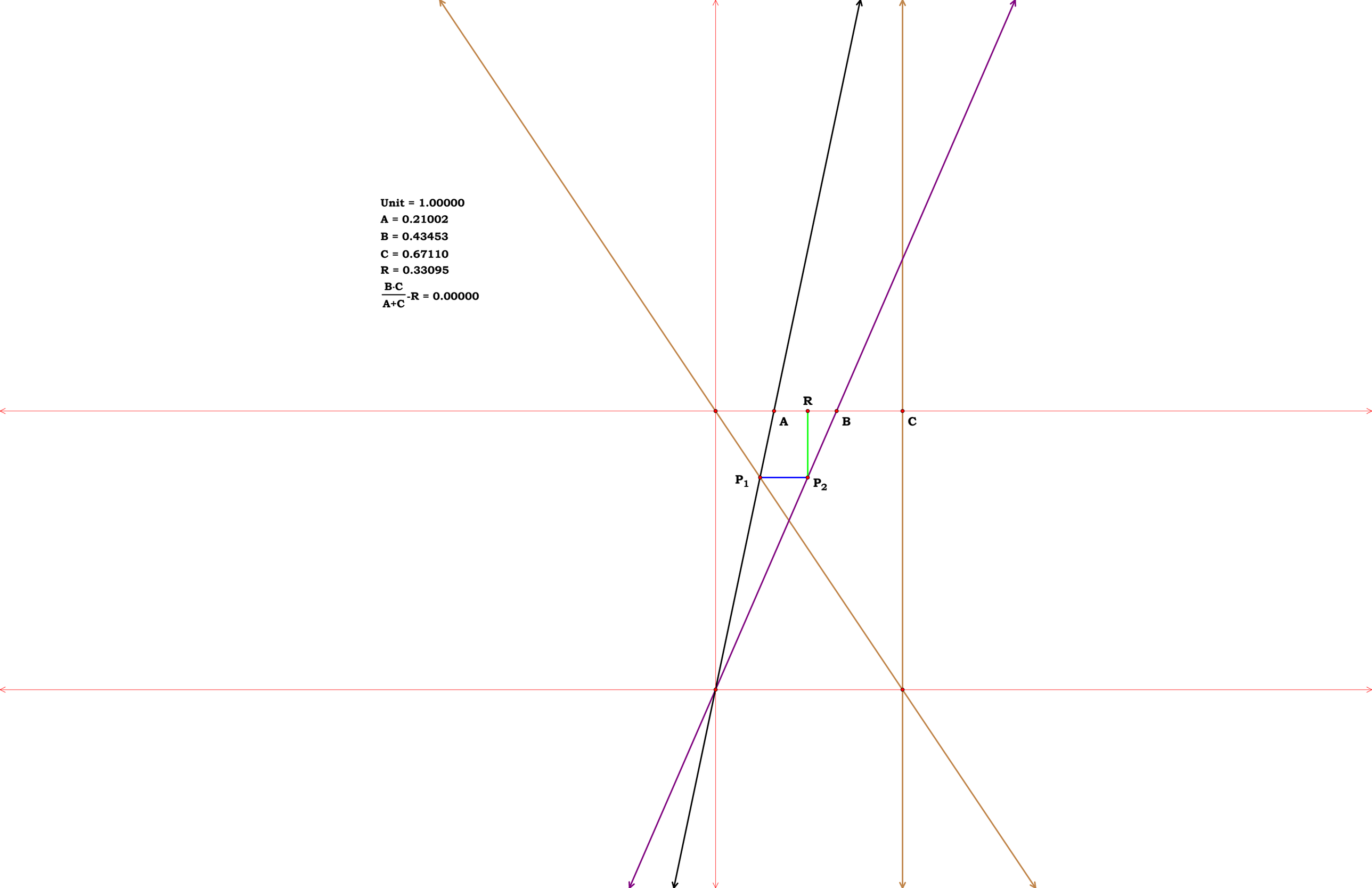
A = 0.21002

B = 0.43453

C = 0.67110

R = 0.33095

$\frac{B \cdot C}{A+C}$-R = 0.00000



Unit = 1.00000

A = 0.19071

B = 0.36693

C = 0.94872

D = 0.76766

R = 0.50749

$$\frac{B \cdot C \cdot D}{A \cdot D - C \cdot (B - D)} - R = 0.00000$$

A

B

R

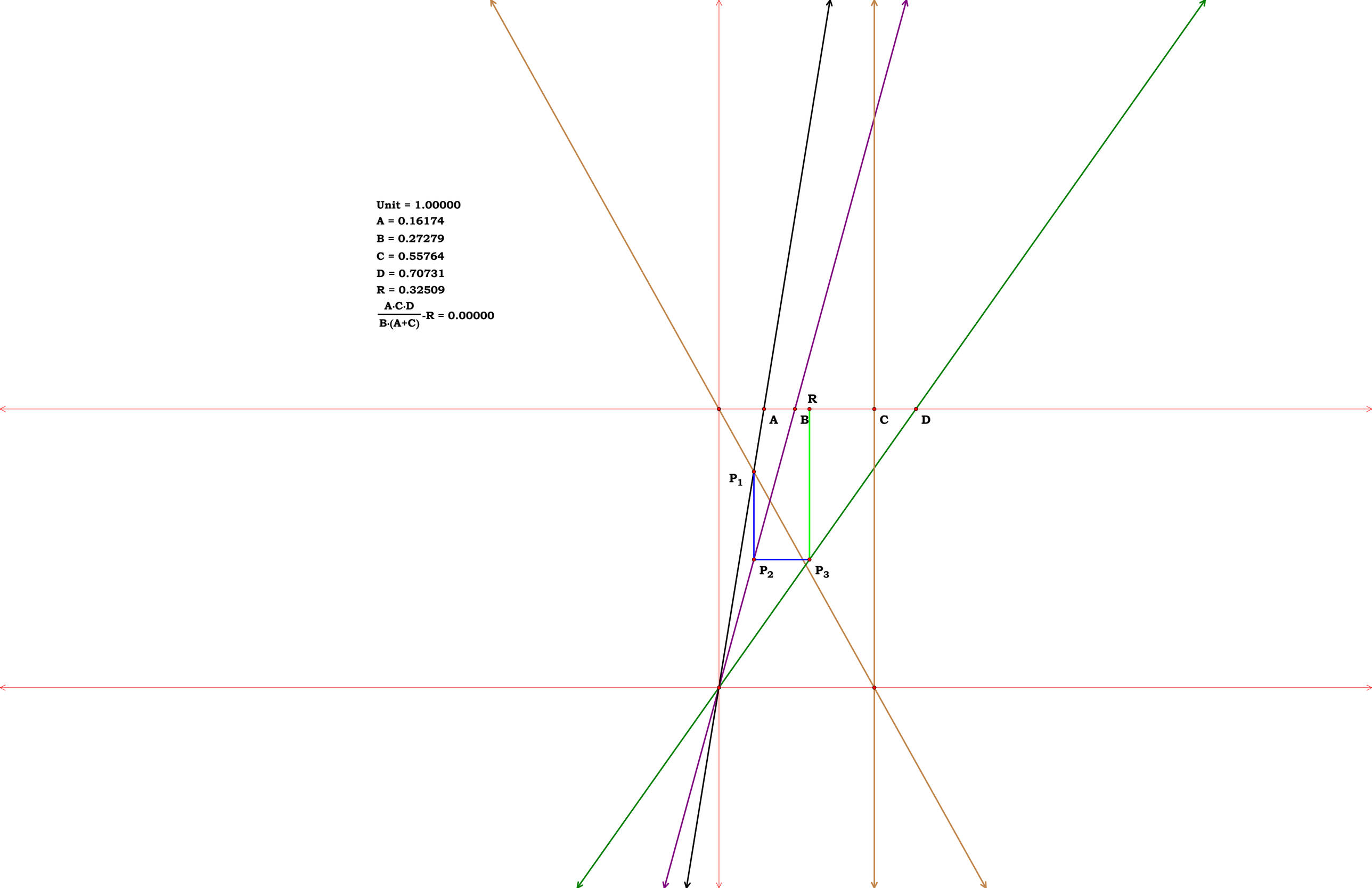
D

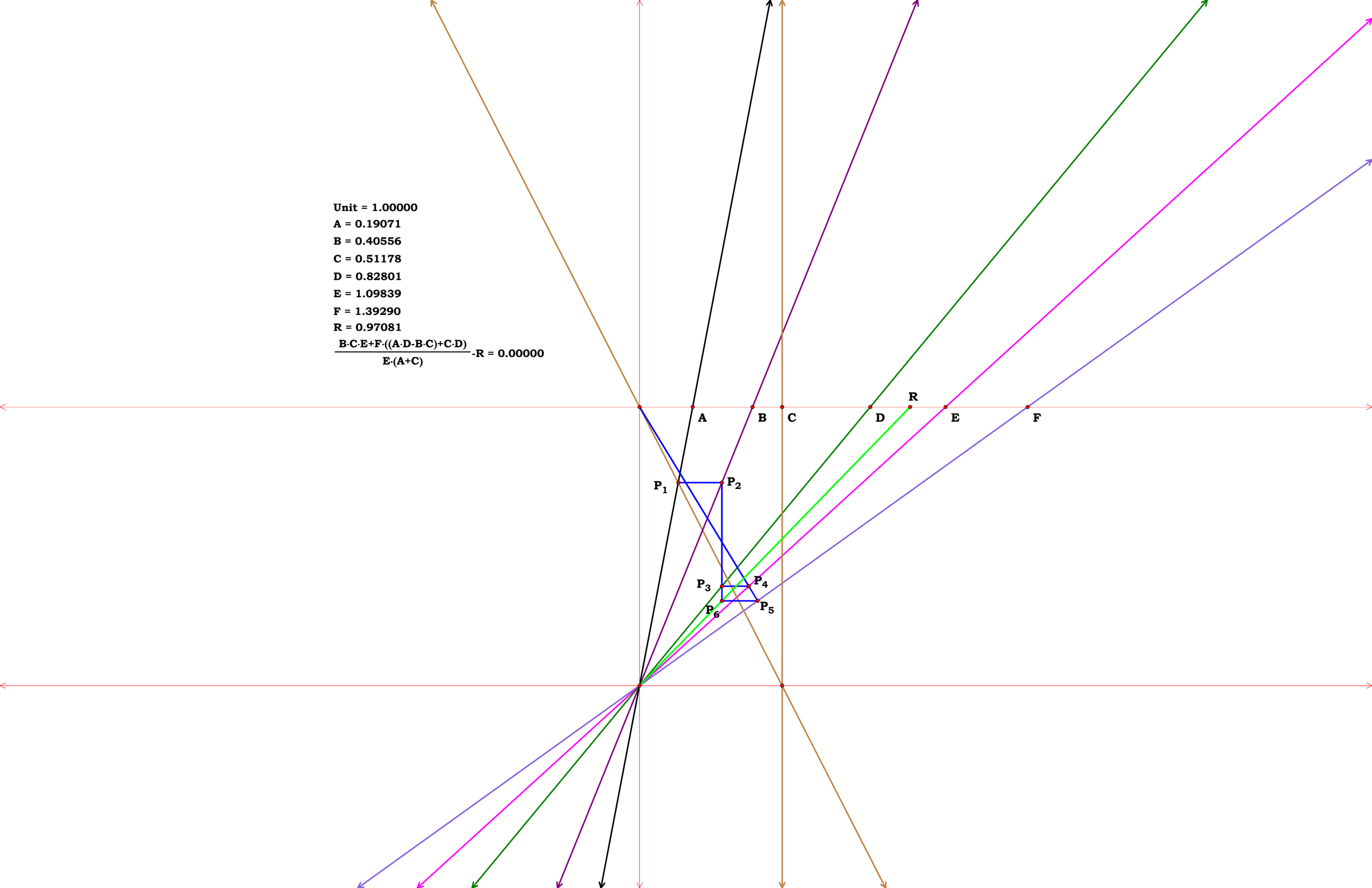
C

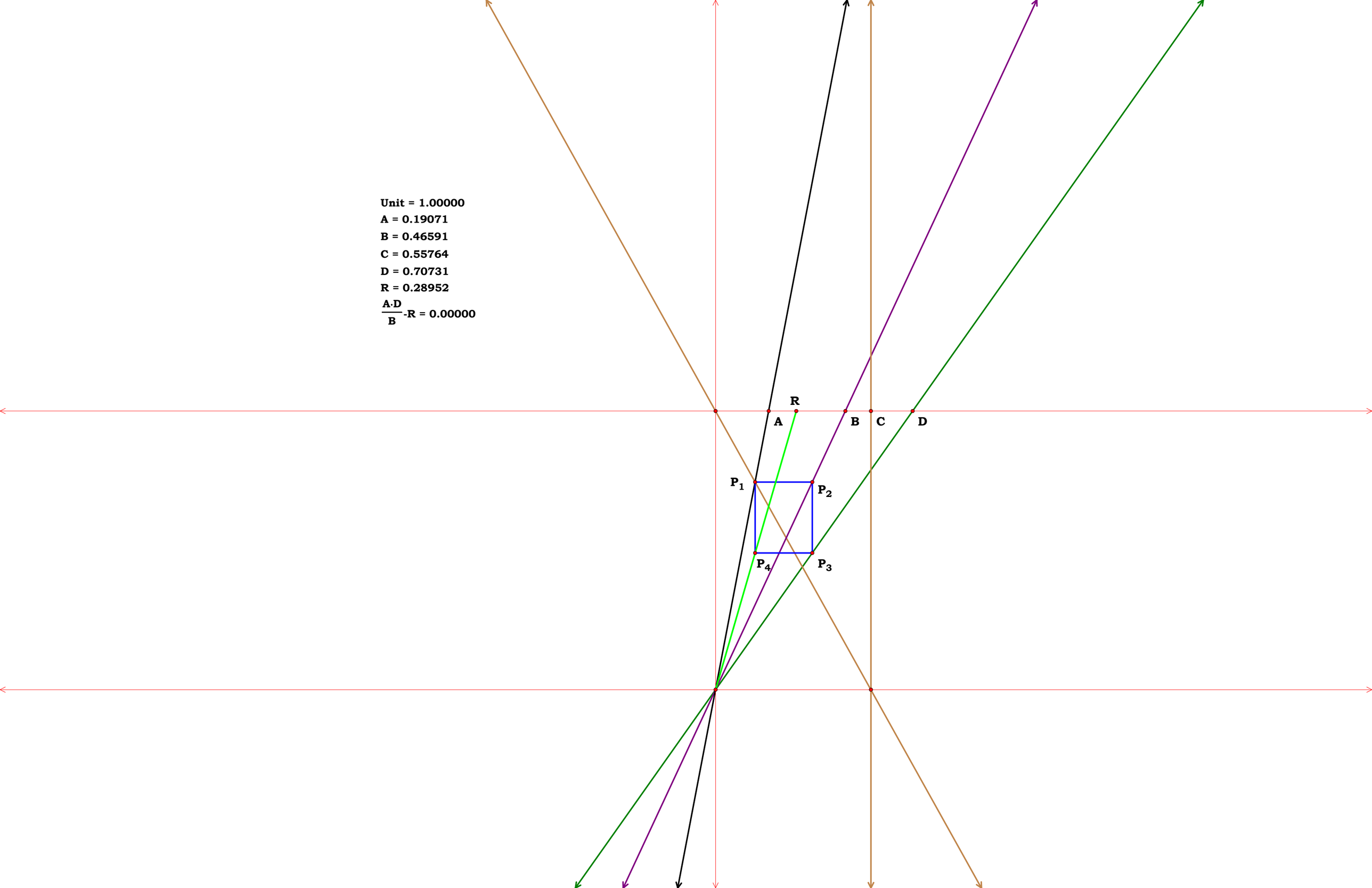
P_1

P_2

P_3


Unit = 1.00000
A = 0.16174
B = 0.27279
C = 0.55764
D = 0.70731
R = 0.32509
$\frac{A \cdot C \cdot D}{B \cdot (A+C)} - R = 0.00000$
R
A
B
C
D
P_1
P_2
P_3


Unit = 1.00000
A = 0.19071
B = 0.40556
C = 0.51178
D = 0.82801
E = 1.09839
F = 1.39290
R = 0.97081
(B·C·E+F·((A·D-B·C)+C·D))/(E·(A+C))-R = 0.00000
A
B
C
D
R
E
F
P1
P2
P3
P4
P5
P6


Unit = 1.00000
A = 0.19071
B = 0.46591
C = 0.55764
D = 0.70731
R = 0.28952
$\frac{A \cdot D}{B}$-R = 0.00000
R
A
B
C
D
P_1
P_2
P_3
P_4

Unit = 1.00000

A = 0.94147

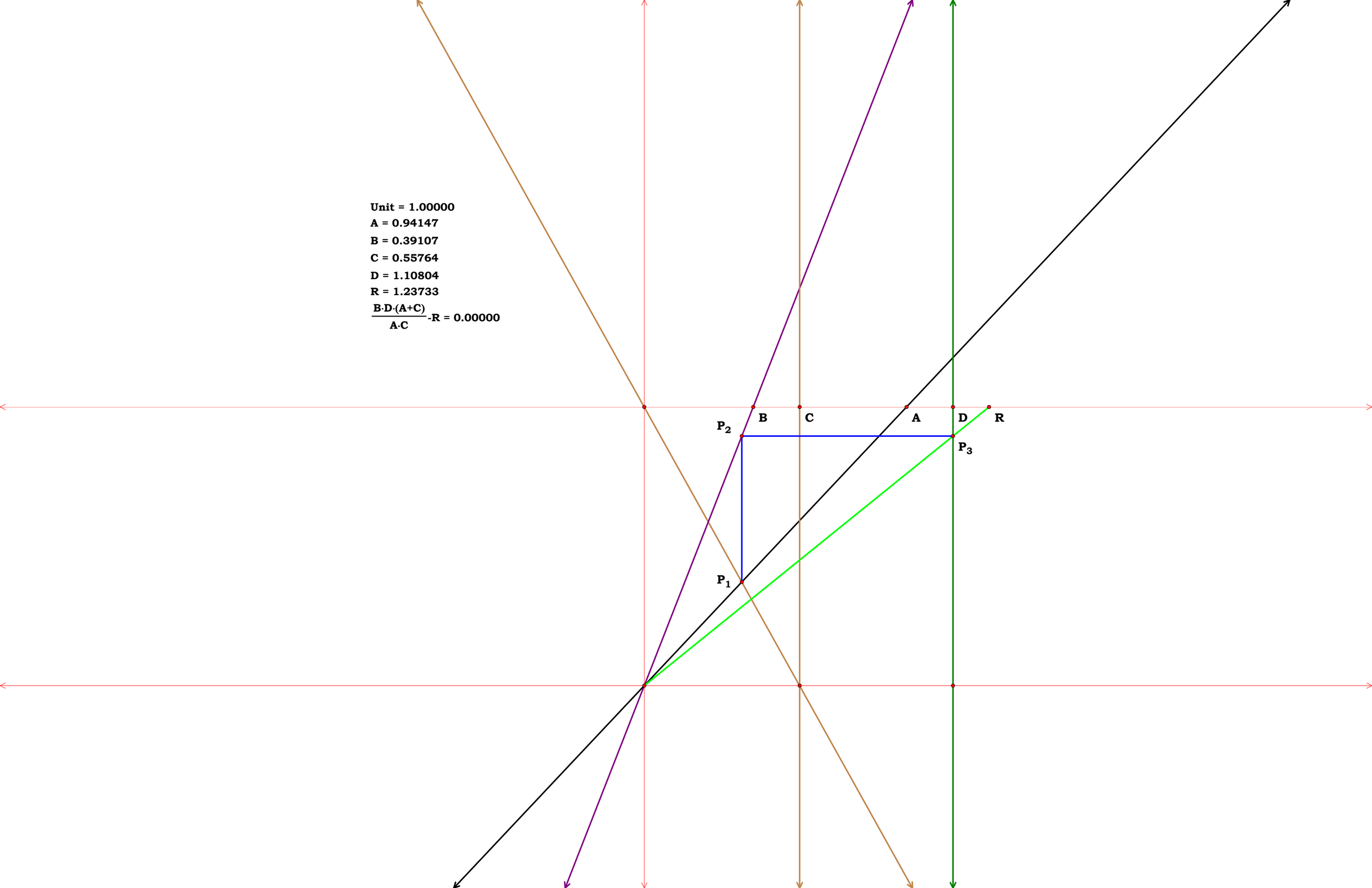
B = 0.39107

C = 0.55764

D = 1.10804

R = 1.23733

$\frac{B \cdot D \cdot (A+C)}{A \cdot C} - R = 0.00000$



Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 0.70731

E = 0.86181

R = 1.22996

$$\frac{E\cdot((A\cdot D-B\cdot C)+C\cdot D)}{B\cdot C}-R = 0.00000$$

A

B

C

D

E

R

P_1

P_2

P_3

P_4

Unit = 1.00000

A = 0.22692

B = 0.62765

C = 0.55764

D = 0.87871

E = 1.15391

F = 1.42187

R = 0.35401

$$\frac{A\cdot B\cdot C\cdot(E-F)+A\cdot D\cdot F\cdot(A+C)}{B\cdot E\cdot(A+C)}-R = 0.00000$$

C

A

R

B

D

E

F

P_1

P_2

P_3

P_4

P_5

P_6

Unit = 1.00000

A = 0.12794

B = 0.35004

C = 0.50453

D = 0.66145

E = 0.86181

F = 1.08149

G = 0.81594

R = 1.40161

$$\frac{F\cdot G\cdot((A\cdot D-B\cdot C)+C\cdot D)}{B\cdot C\cdot E}-R = 0.00000$$

A B C D G E F R

P_1 P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 0.70731

E = 0.86181

F = 0.48522

R = 1.14174

$$\frac{B\cdot E\cdot F\cdot(A+C)-A\cdot C\cdot D\cdot F}{A\cdot C\cdot D}-R = 0.00000$$

A B F C D E R

P_1 P_2 P_3 P_4 P_5

Unit = 1.00000
A = 0.25106
B = 0.38142
C = 0.53350
D = 0.68800
E = 0.92940
F = 1.09839
R = 1.35378
$\frac{F\cdot(A\cdot D\cdot E-B\cdot C\cdot D-C\cdot E\cdot(B-D))}{B\cdot C\cdot D}-R = 0.00000$

A B C D E F R

P_1 P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 0.16657

B = 0.43935

C = 0.54557

D = 0.69283

R = 1.34744

$$\frac{D^2\cdot(A+C)}{(A\cdot D-B\cdot C)+C\cdot D}-R = 0.00000$$

A

B

C

D

R

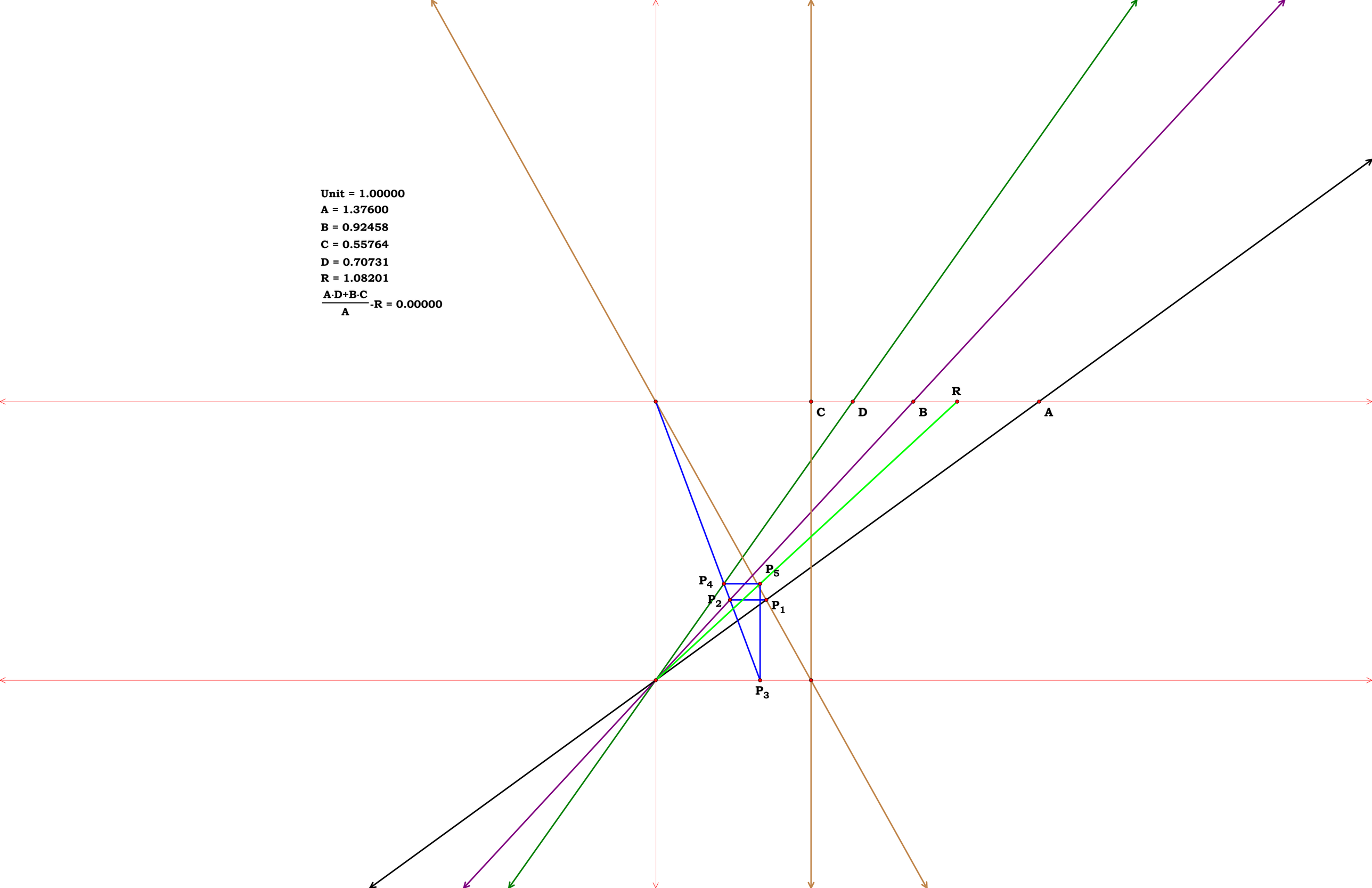
P_1

P_2

P_3

P_4

P_5


Unit = 1.00000
A = 1.37600
B = 0.92458
C = 0.55764
D = 0.70731
R = 1.08201
(A·D+B·C)/A -R = 0.00000
C
D
B
R
A
P4
P5
P2
P1
P3

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.57937

D = 0.70731

E = 0.86181

R = 0.51307

$\frac{A \cdot D \cdot E}{B \cdot C}$ - R = 0.00000

R

A

B

C

D

E

P_1

P_2

P_3

P_4

Unit = 1.00000

A = 0.21485

B = 0.13760

C = 0.33555

D = 0.70731

E = 0.86181

R = 1.01986

$\frac{D \cdot E \cdot (A-B)}{B \cdot C} - R = 0.00000$

B A C D E R

P_1 P_2 P_3 P_4

Unit = 1.00000

A = 0.19071

B = 0.48764

C = 0.55764

D = 0.70731

E = 0.86181

F = 1.07907

G = 0.26796

R = 0.94087

$$\frac{C \cdot F \cdot G \cdot (A+B)}{A \cdot D \cdot E} - R = 0.00000$$

A G B C D E R F

P_1 P_2 P_3 P_4 P_5 P_6 P_7

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.36211

D = 0.50212

E = 0.86181

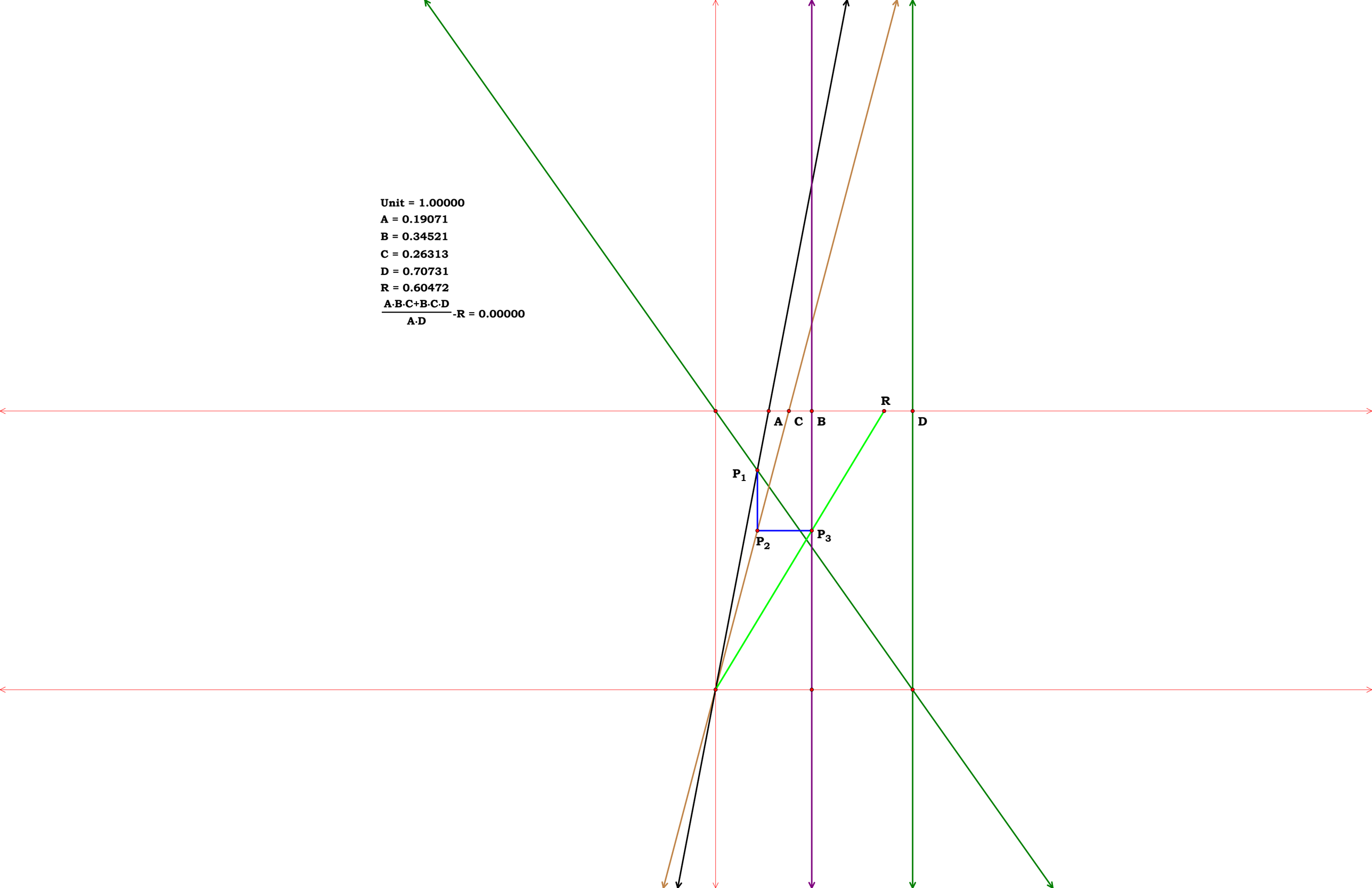
F = 0.63489

R = 1.15821

$$\frac{E\cdot F\cdot((A\cdot D-B\cdot C)+B\cdot D)}{B\cdot C\cdot D}-R = 0.00000$$

A C B D F E R

P_1 P_2 P_3 P_4 P_5 P_6


Unit = 1.00000
A = 0.19071
B = 0.34521
C = 0.26313
D = 0.70731
R = 0.60472
(A·B·C+B·C·D)/(A·D) -R = 0.00000
A
C
B
D
R
P1
P2
P3

Unit = 1.00000

A = 0.31865

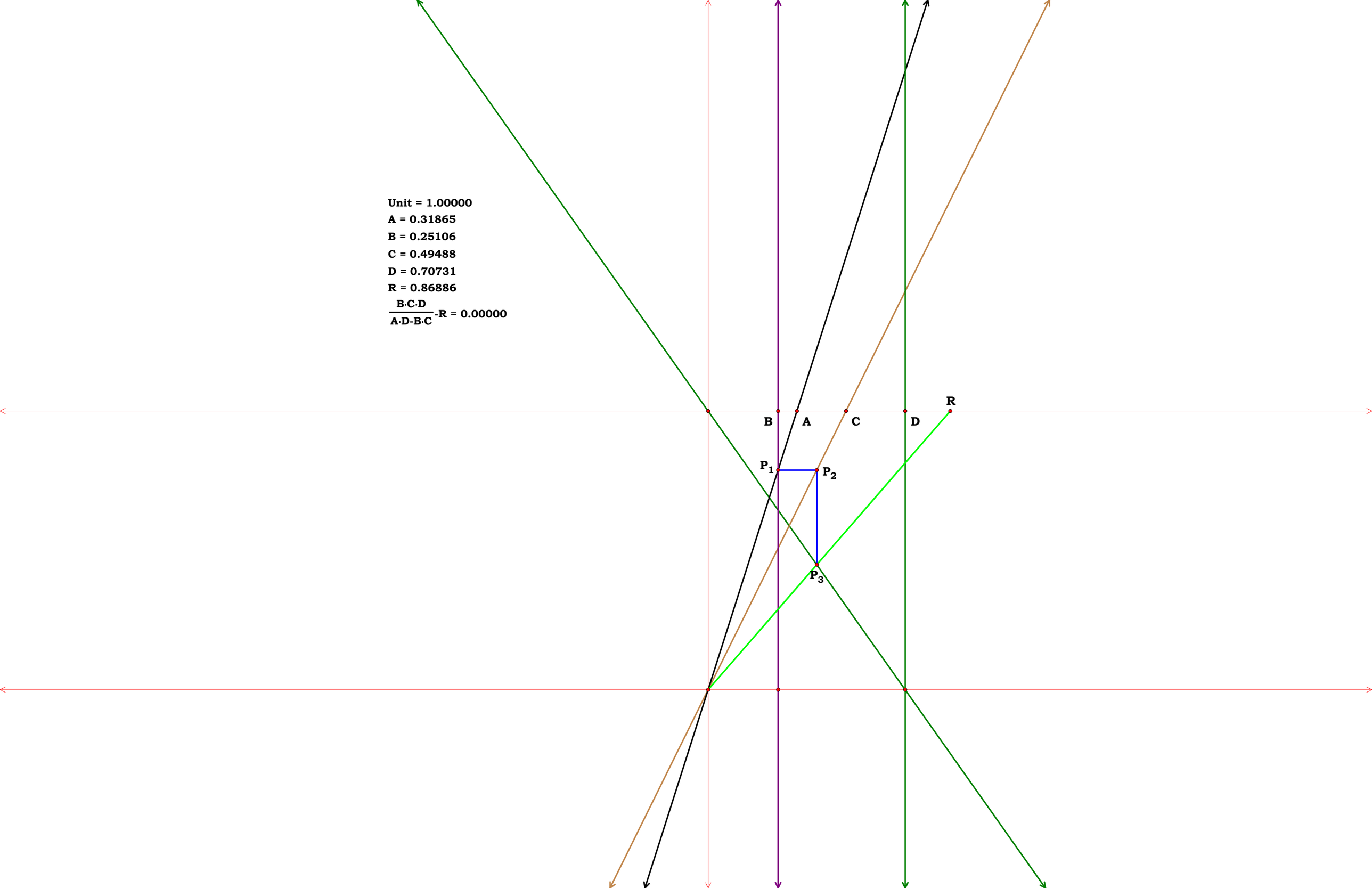
B = 0.25106

C = 0.49488

D = 0.70731

R = 0.86886

$\frac{B \cdot C \cdot D}{A \cdot D - B \cdot C} - R = 0.00000$



Unit = 1.00000

A = 0.19795

B = 0.39107

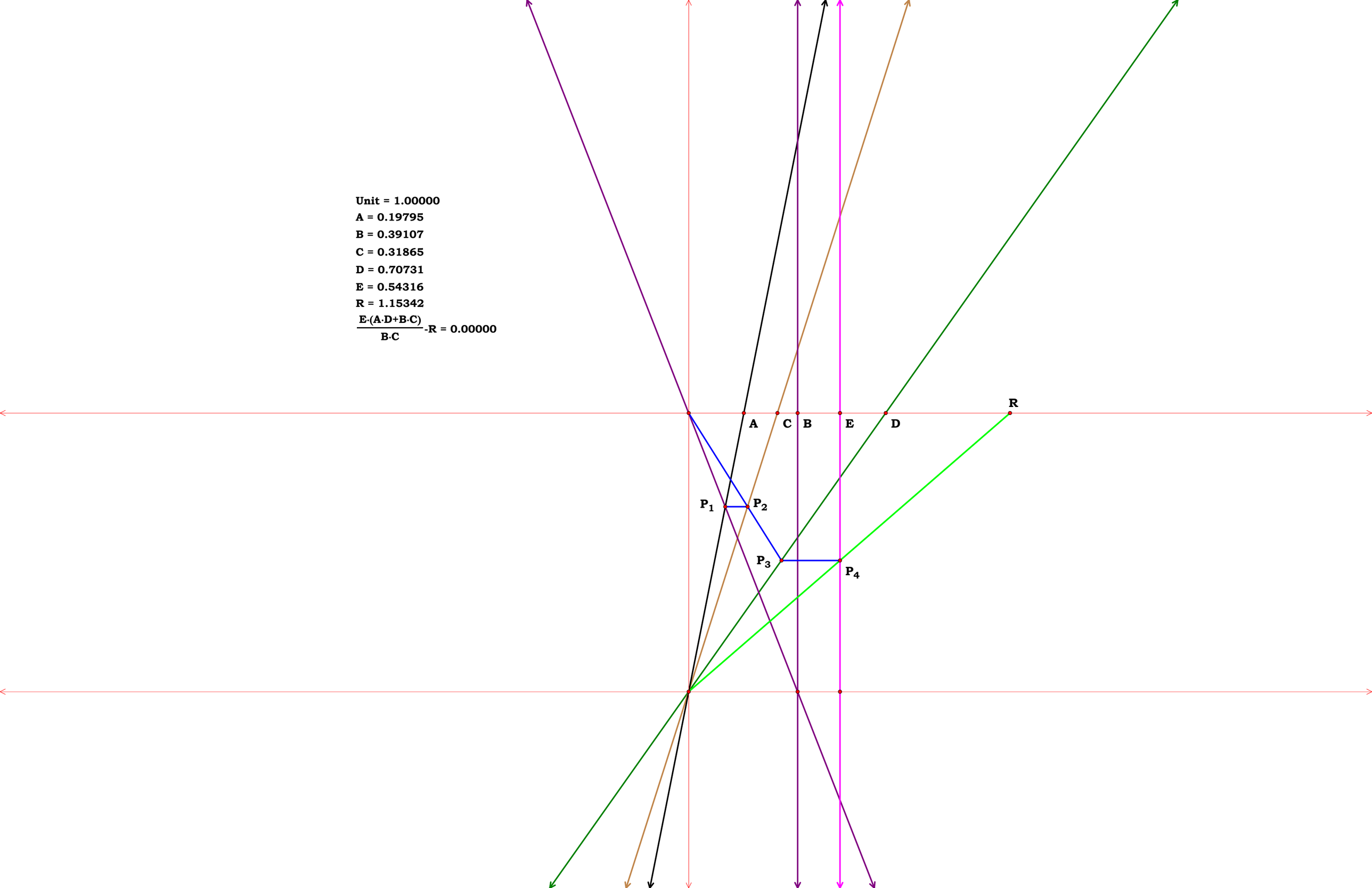
C = 0.31865

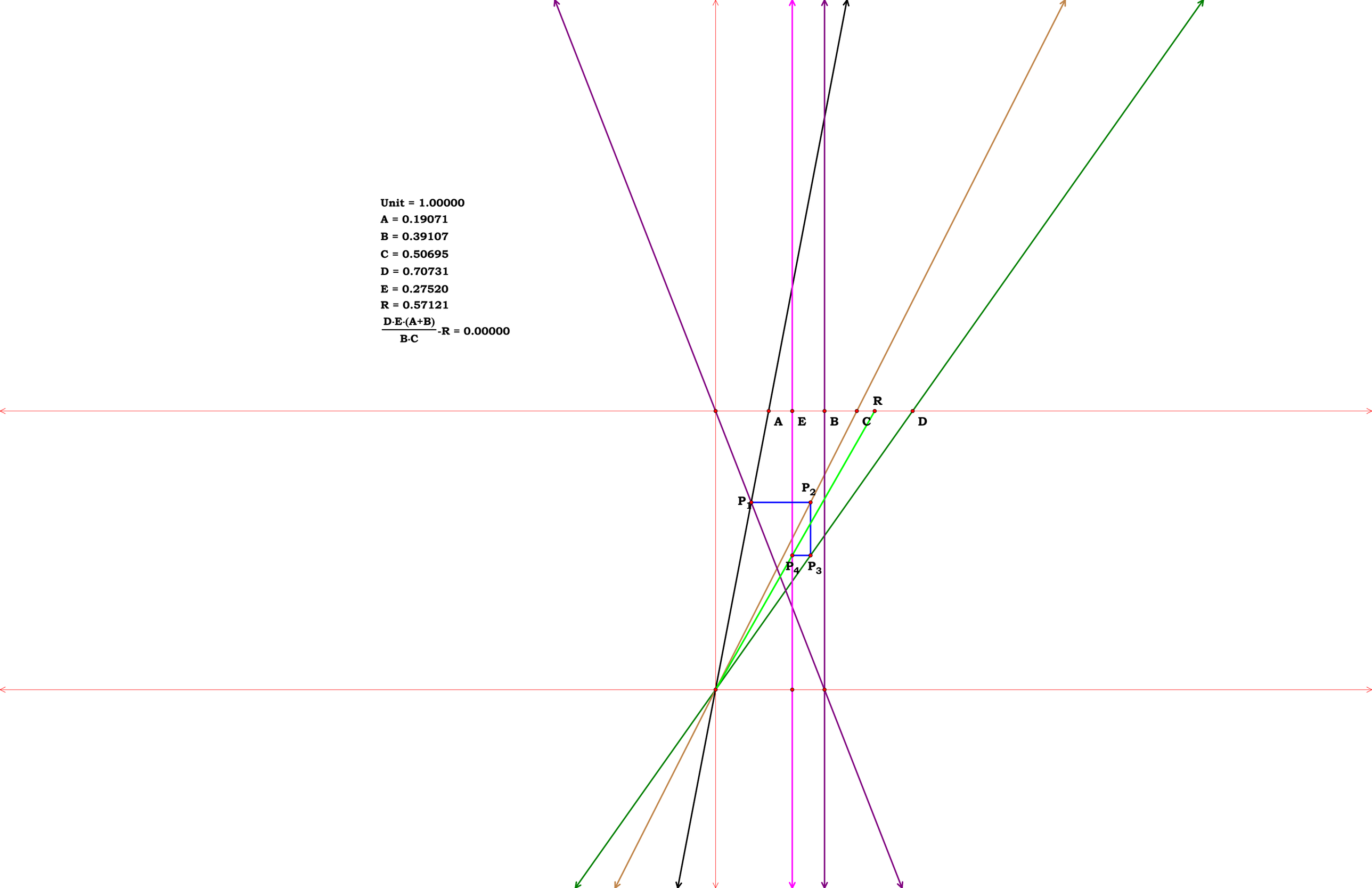
D = 0.70731

E = 0.54316

R = 1.15342

$\frac{E\cdot(A\cdot D+B\cdot C)}{B\cdot C}$-R = 0.00000




Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.50695
D = 0.70731
E = 0.27520
R = 0.57121
$\frac{D \cdot E \cdot (A+B)}{B \cdot C} - R = 0.00000$
A
E
B
C
R
D
P_1
P_2
P_3
P_4

Unit = 1.00000

A = 0.32831

B = 0.23658

C = 0.45867

D = 0.70731

E = 0.51419

R = 0.96521

$$\frac{A \cdot D \cdot E}{A \cdot D - B \cdot C} - R = 0.00000$$

B A C E D R

P_1 P_2 P_3

Unit = 1.00000

A = 1.47498

B = 0.31624

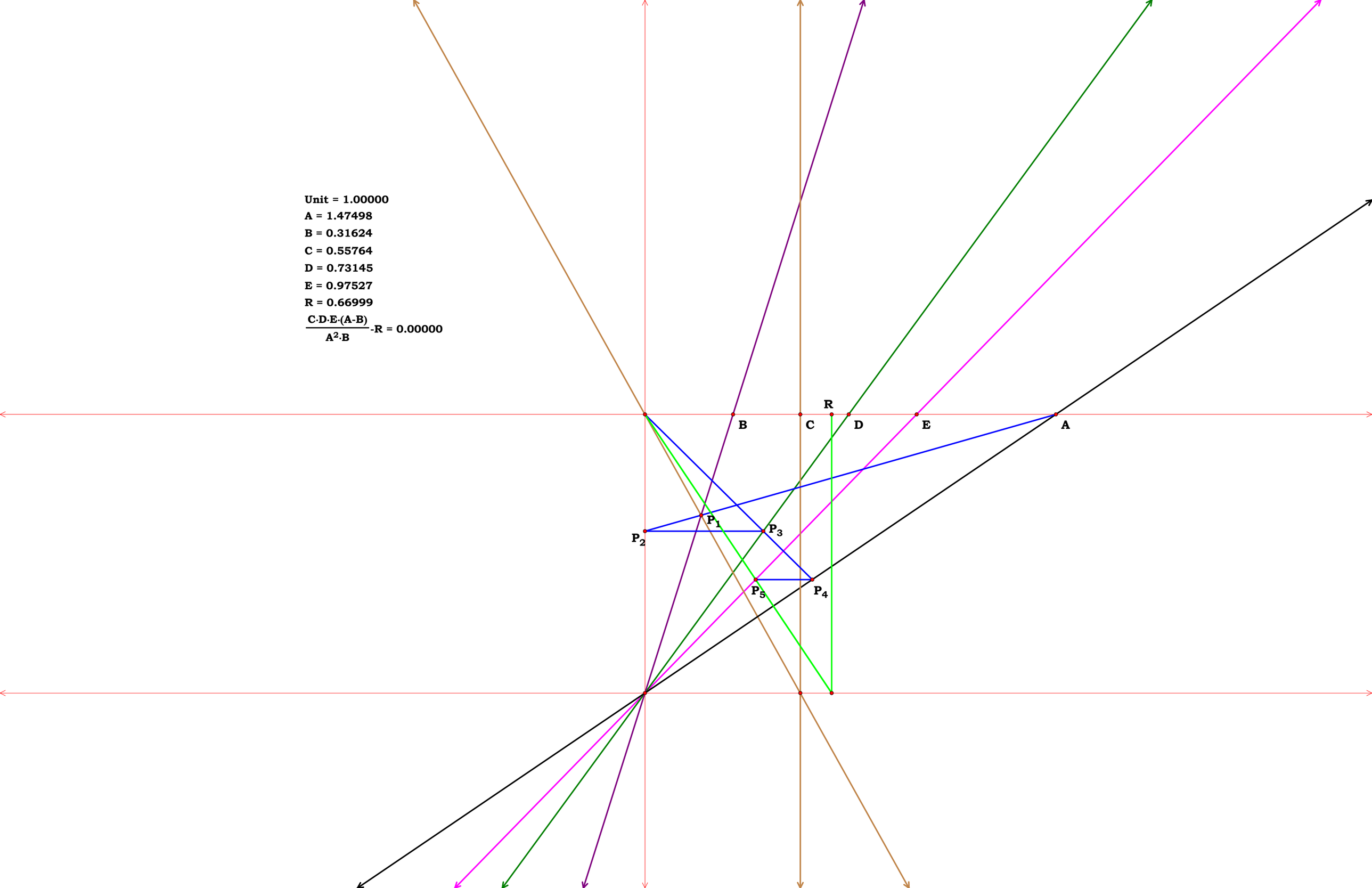
C = 0.55764

D = 0.73145

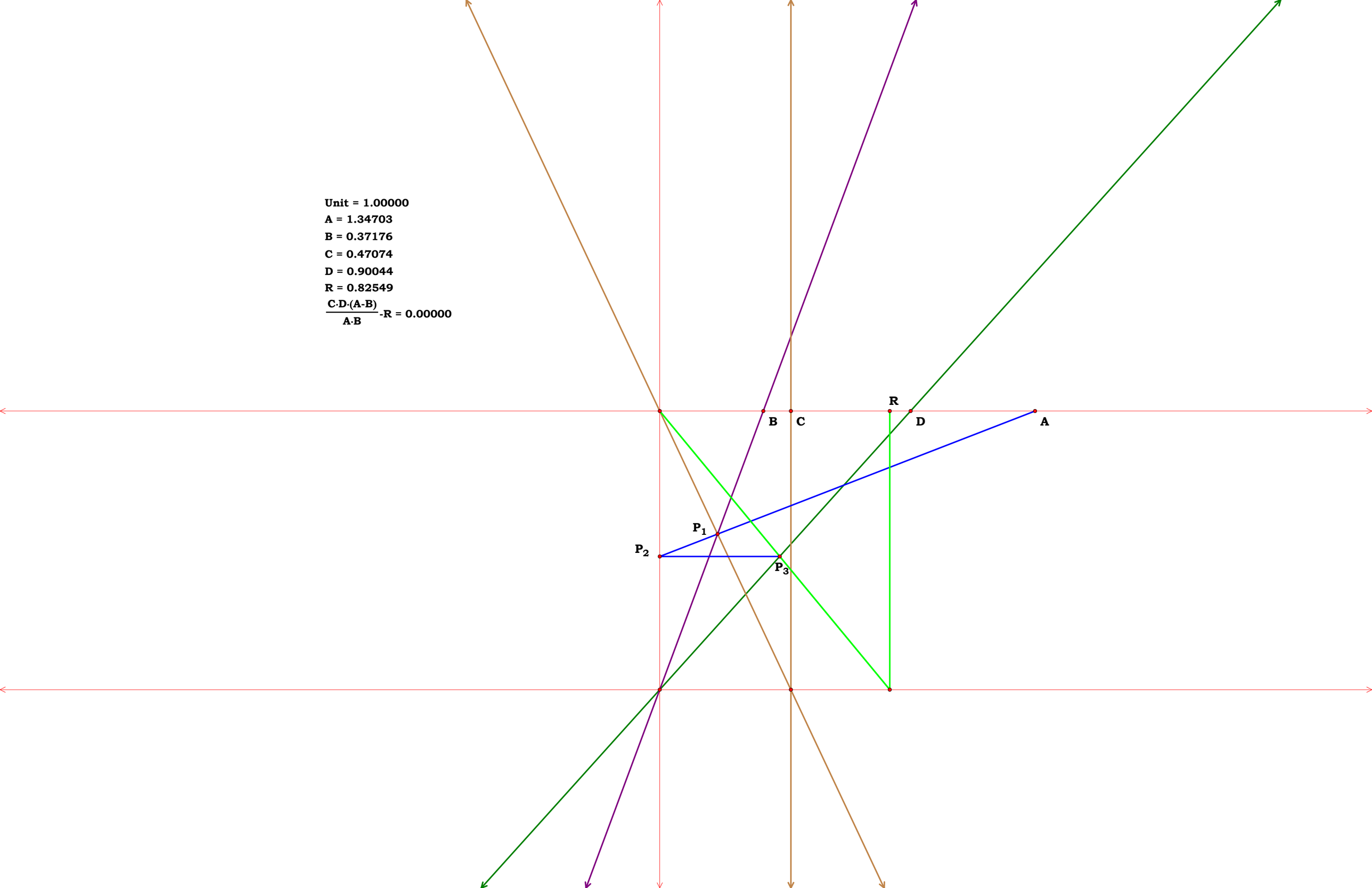
E = 0.97527

R = 0.66999

$\frac{C \cdot D \cdot E \cdot (A-B)}{A^2 \cdot B} - R = 0.00000$



Unit = 1.00000
A = 1.34703
B = 0.37176
C = 0.47074
D = 0.90044
R = 0.82549
$\frac{C \cdot D \cdot (A-B)}{A \cdot B} - R = 0.00000$



Unit = 1.00000

A = 1.13701

B = 0.46591

C = 0.55764

D = 0.67110

R = 0.39327

$$\frac{A \cdot B \cdot D}{(A \cdot B + A \cdot C) - B \cdot C} - R = 0.00000$$

R

B

C

D

A

P_1

P_2

P_3

Unit = 1.00000

A = 1.22633

B = 1.05252

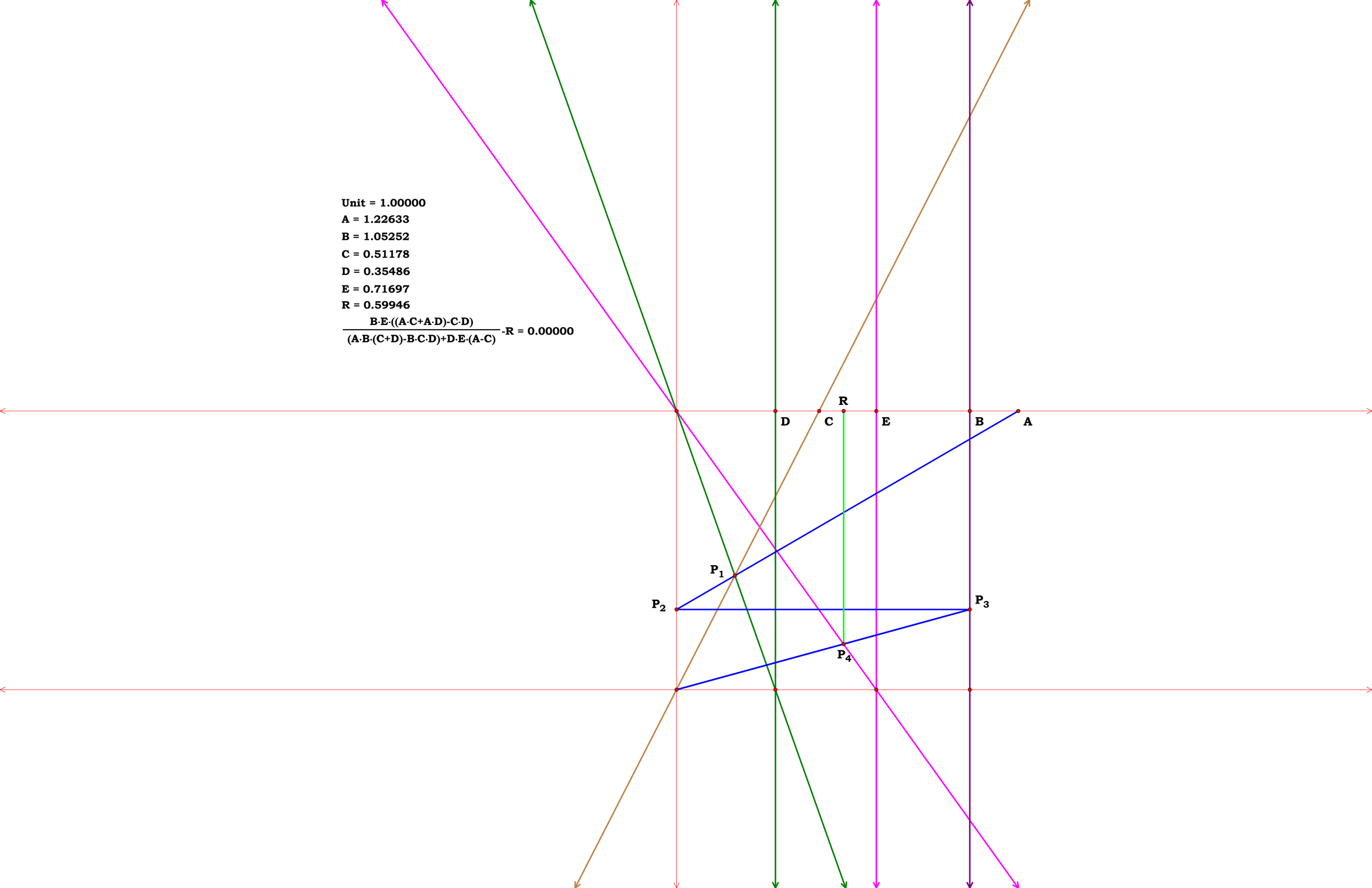
C = 0.51178

D = 0.35486

E = 0.71697

R = 0.59946

$$\frac{B\cdot E\cdot((A\cdot C+A\cdot D)-C\cdot D)}{(A\cdot B\cdot(C+D)-B\cdot C\cdot D)+D\cdot E\cdot(A-C)}-R = 0.00000$$



Unit = 1.00000

A = 1.06459

B = 0.39107

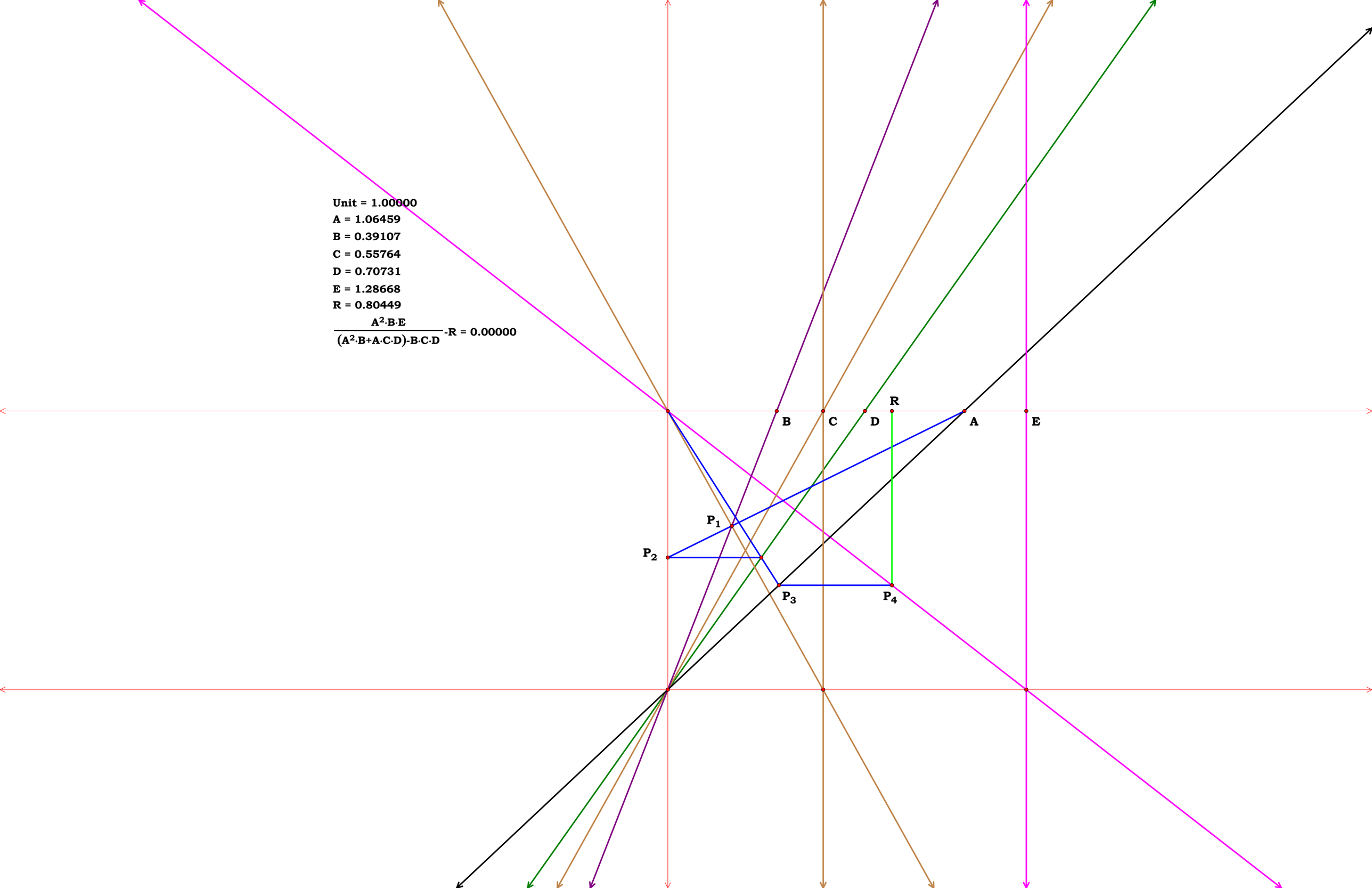
C = 0.55764

D = 0.70731

E = 1.28668

R = 0.80449

$$\frac{A^2 \cdot B \cdot E}{(A^2 \cdot B + A \cdot C \cdot D) - B \cdot C \cdot D} - R = 0.00000$$



Unit = 1.00000

A = 1.21909

B = 0.89802

C = 1.00182

D = 1.64637

E = 0.42246

F = 0.72421

R = 0.55528

$$\frac{E\cdot F\cdot\left(A^2\cdot C+B\cdot D\cdot(A-C)\right)}{A\cdot E\cdot(A\cdot C+B\cdot D)+B\cdot D\cdot(A\cdot F-C\cdot E-C\cdot F)}-R = 0.00000$$

R

E F B C A D

P_1

P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 1.12253

B = 0.39107

C = 0.27037

D = 0.62524

E = 0.52385

R = 0.84423

$$\frac{E\cdot((A^2\cdot C+A\cdot B\cdot D)-B\cdot C\cdot D)}{A^2\cdot C}-R = 0.00000$$

C B E D R A

P_1 P_2 P_3 P_4 P_5

Unit = 1.00000

A = 1.35910

B = 0.39832

C = 0.19554

D = 0.28244

E = 0.86181

F = 0.50695

R = 0.64431

$$\frac{A^2 \cdot C \cdot E \cdot F}{(A^2 \cdot C \cdot E - A \cdot B \cdot D \cdot F) + B \cdot C \cdot D \cdot F} - R = 0.00000$$

C D B F R E A

P_1 P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 0.55764

B = 0.39107

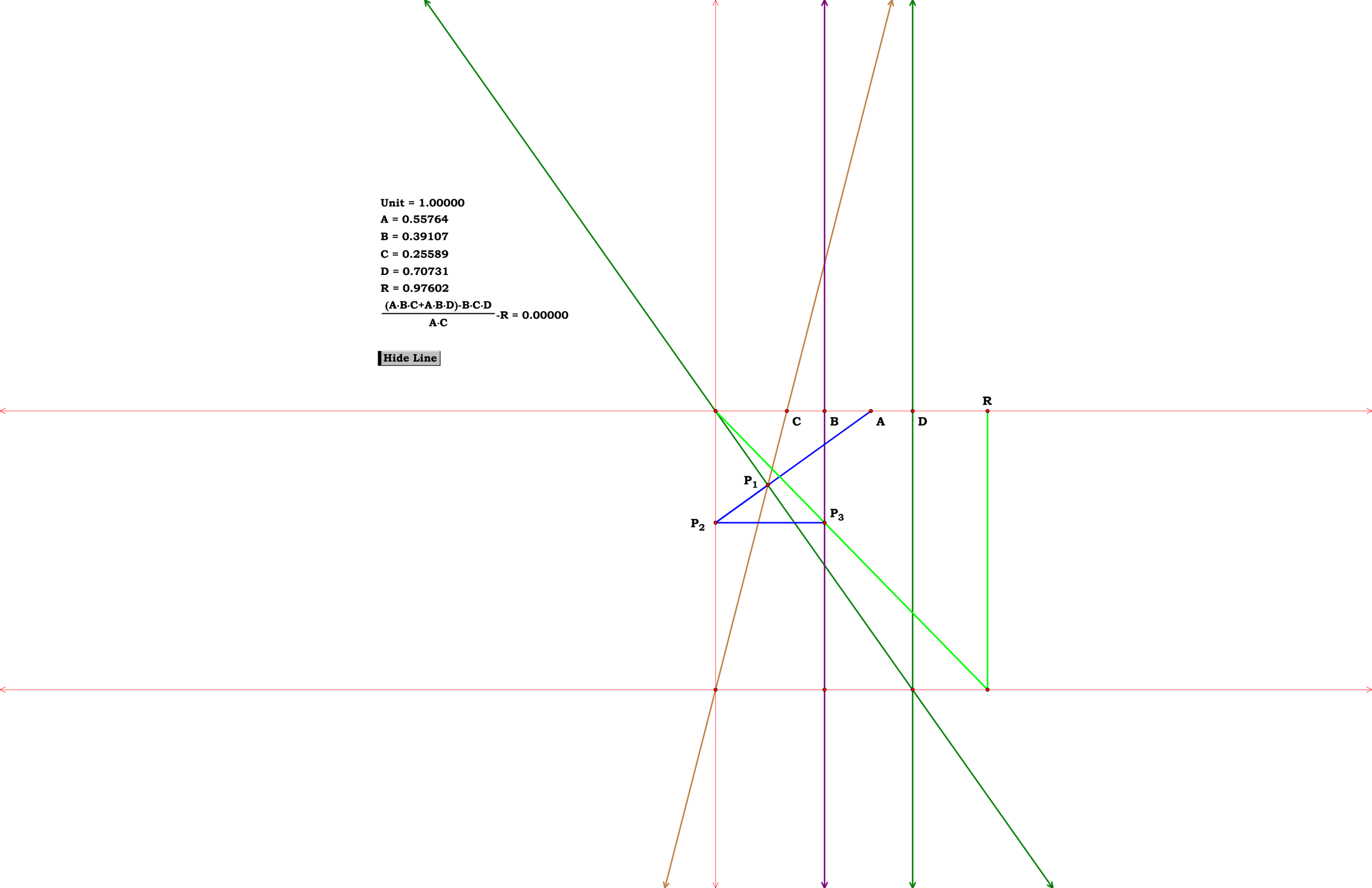
C = 0.25589

D = 0.70731

R = 0.97602

$$\frac{(A\cdot B\cdot C+A\cdot B\cdot D)-B\cdot C\cdot D}{A\cdot C}-R = 0.00000$$

Hide Line



Unit = 1.00000

A = 1.35669

B = 0.28244

C = 0.42970

D = 0.70731

R = 0.58716

$\frac{A \cdot B \cdot D}{A \cdot C - B \cdot C} - R = 0.00000$

R

B

C

D

A

P_1

P_2

P_3

Unit = 1.00000

A = 1.07907

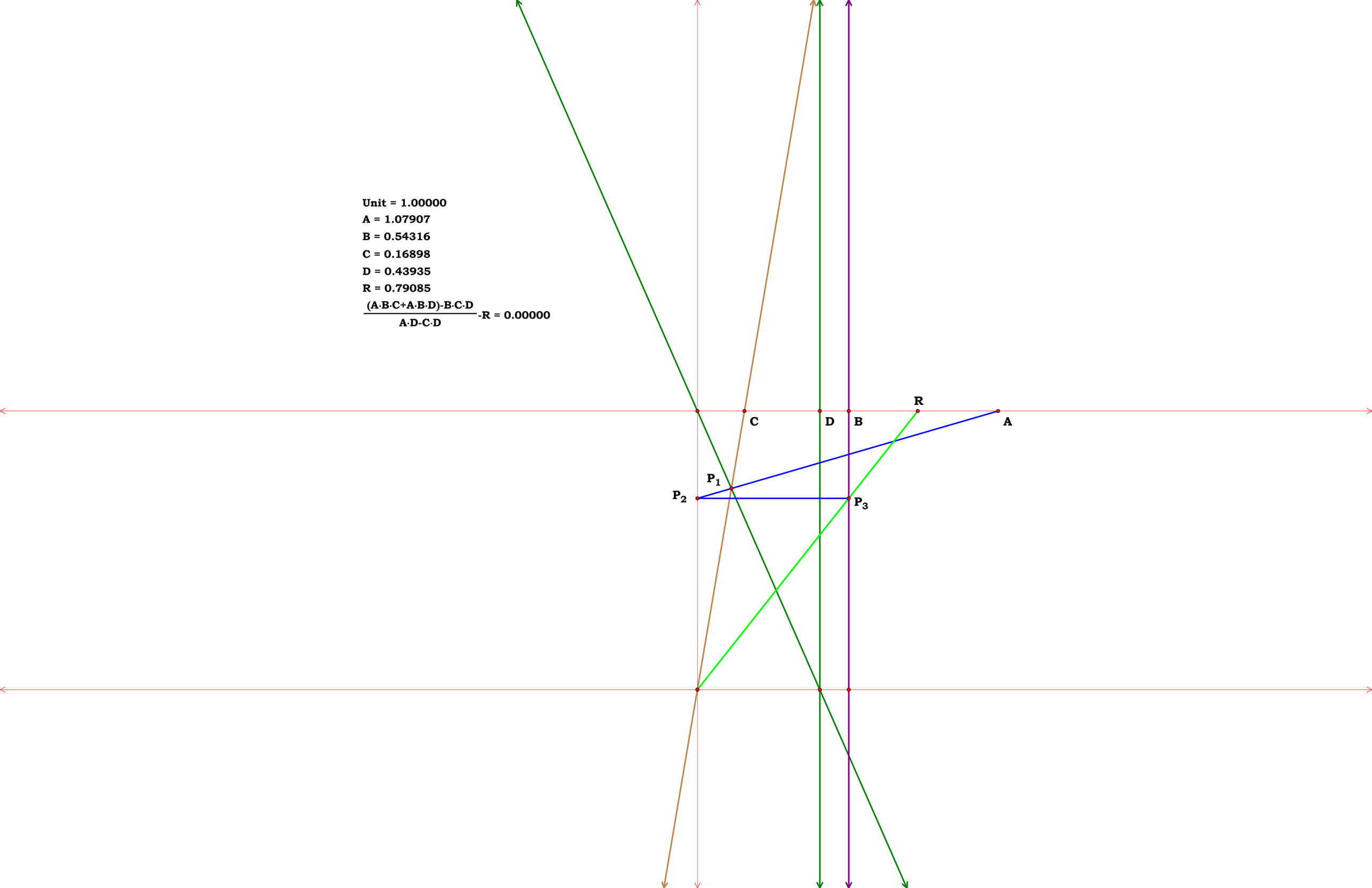
B = 0.54316

C = 0.16898

D = 0.43935

R = 0.79085

$$\frac{(A\cdot B\cdot C+A\cdot B\cdot D)-B\cdot C\cdot D}{A\cdot D-C\cdot D}-R = 0.00000$$



Unit = 1.00000

A = 0.71697

B = 0.90285

C = 0.34521

D = 0.20278

E = 0.46591

R = 1.21473

$\frac{A^2 \cdot C \cdot E}{B \cdot D \cdot (A-C)} - R = 0.00000$

Hide Line

D C E A B R

P_1

P_2

P_3

P_4

P_5

Unit = 1.00000

A = 0.92699

B = 0.40797

C = 0.12794

D = 0.60109

E = 0.50212

R = 0.78385

$$\frac{E\cdot(A^2\cdot C+B\cdot D\cdot(A-C))}{B\cdot D\cdot(A-C)}-R = 0.00000$$

C B E D R A

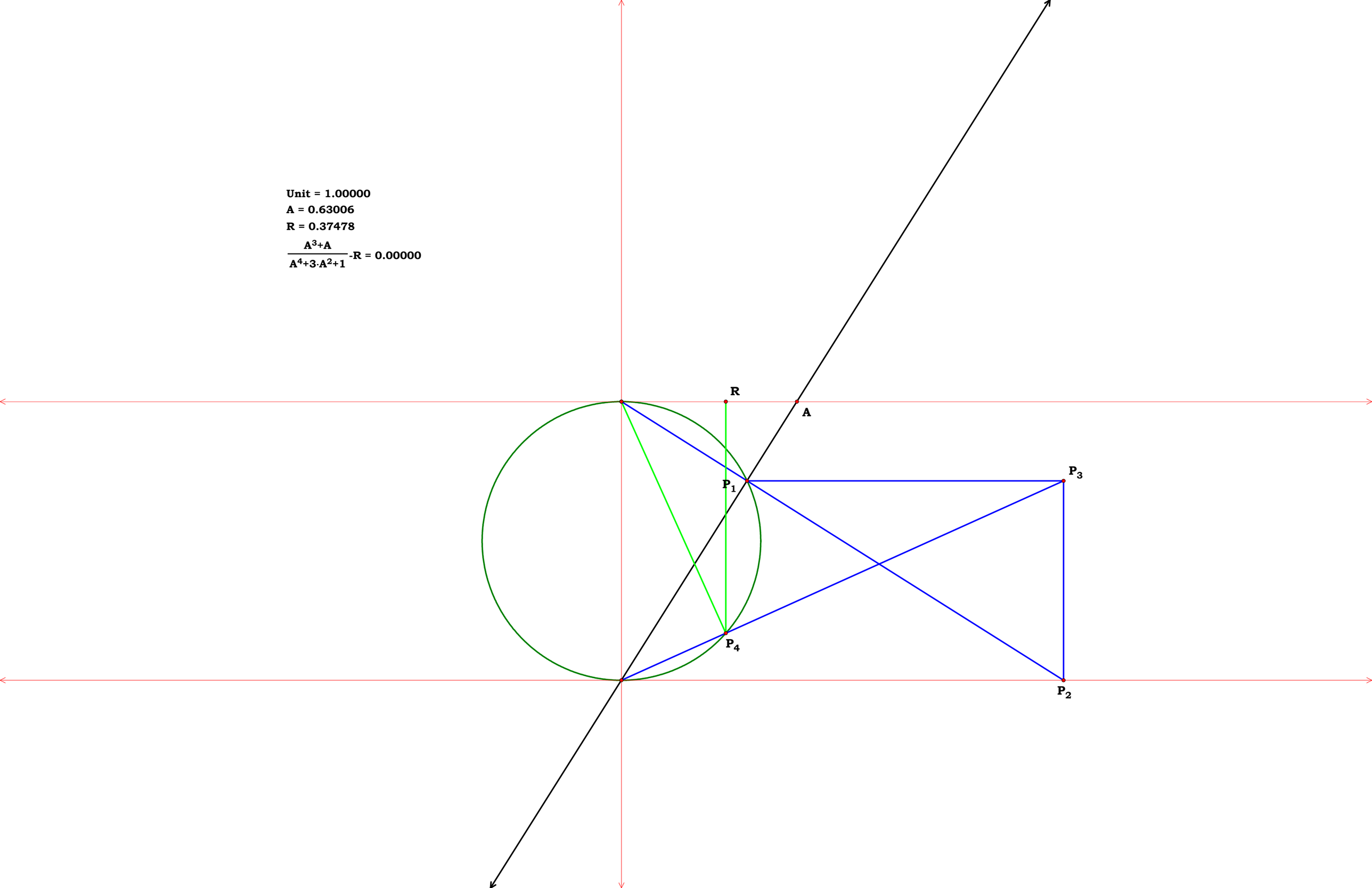
P_1 P_2 P_3 P_4 P_5

Unit = 1.00000

A = 0.63006

R = 0.37478

$$\frac{A^3+A}{A^4+3\cdot A^2+1}-R = 0.00000$$

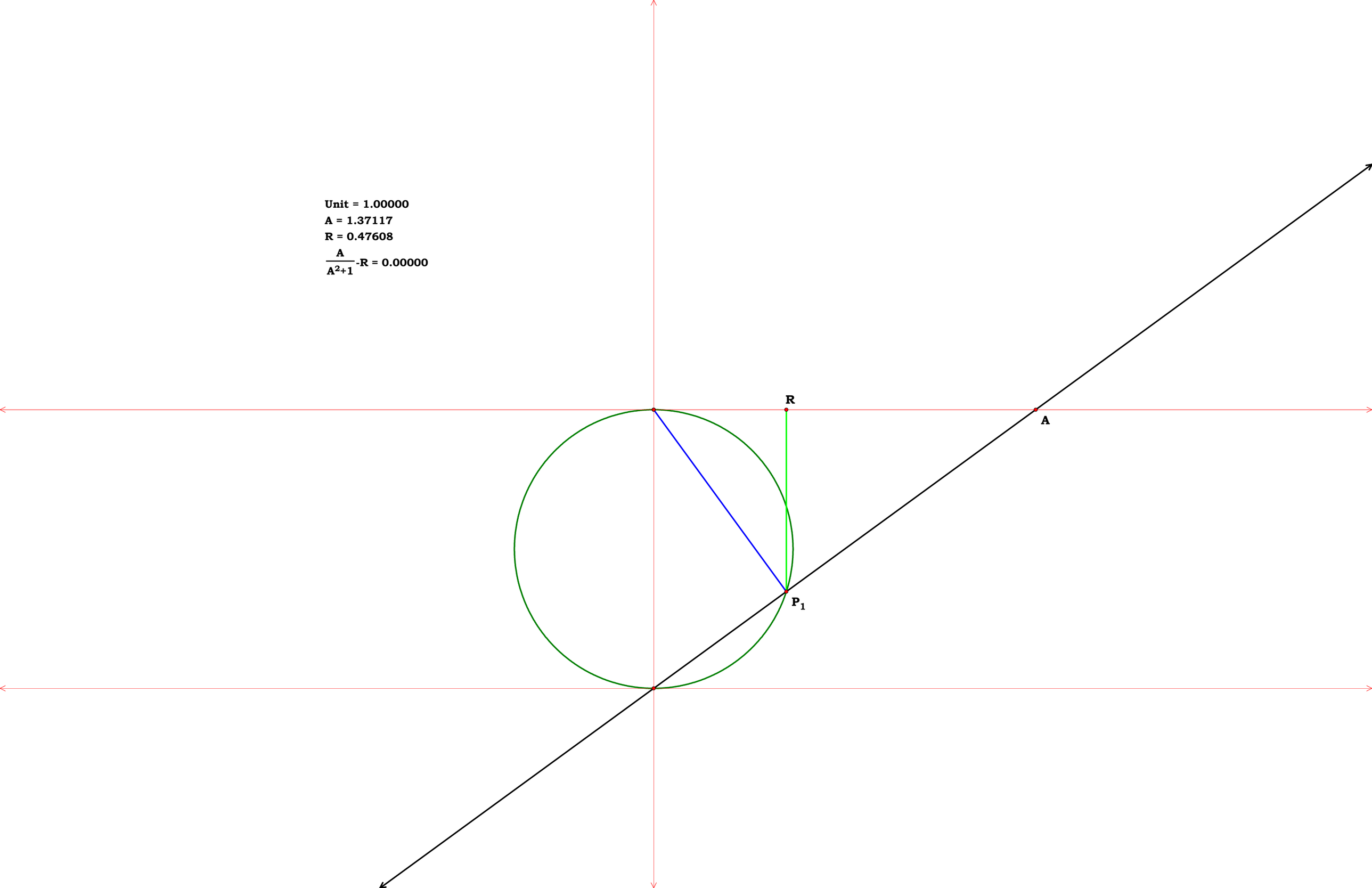


Unit = 1.00000

A = 1.37117

R = 0.47608

$\frac{A}{A^2+1}$-R = 0.00000



Unit = 1.00000

A = 1.35186

B = 1.13218

R = 0.47657

$$\frac{A^2 \cdot B \cdot (A^2+1)}{A^4 \cdot B^2 + A^4 + 2 \cdot A^2 + 1} - R = 0.00000$$

R

P_3

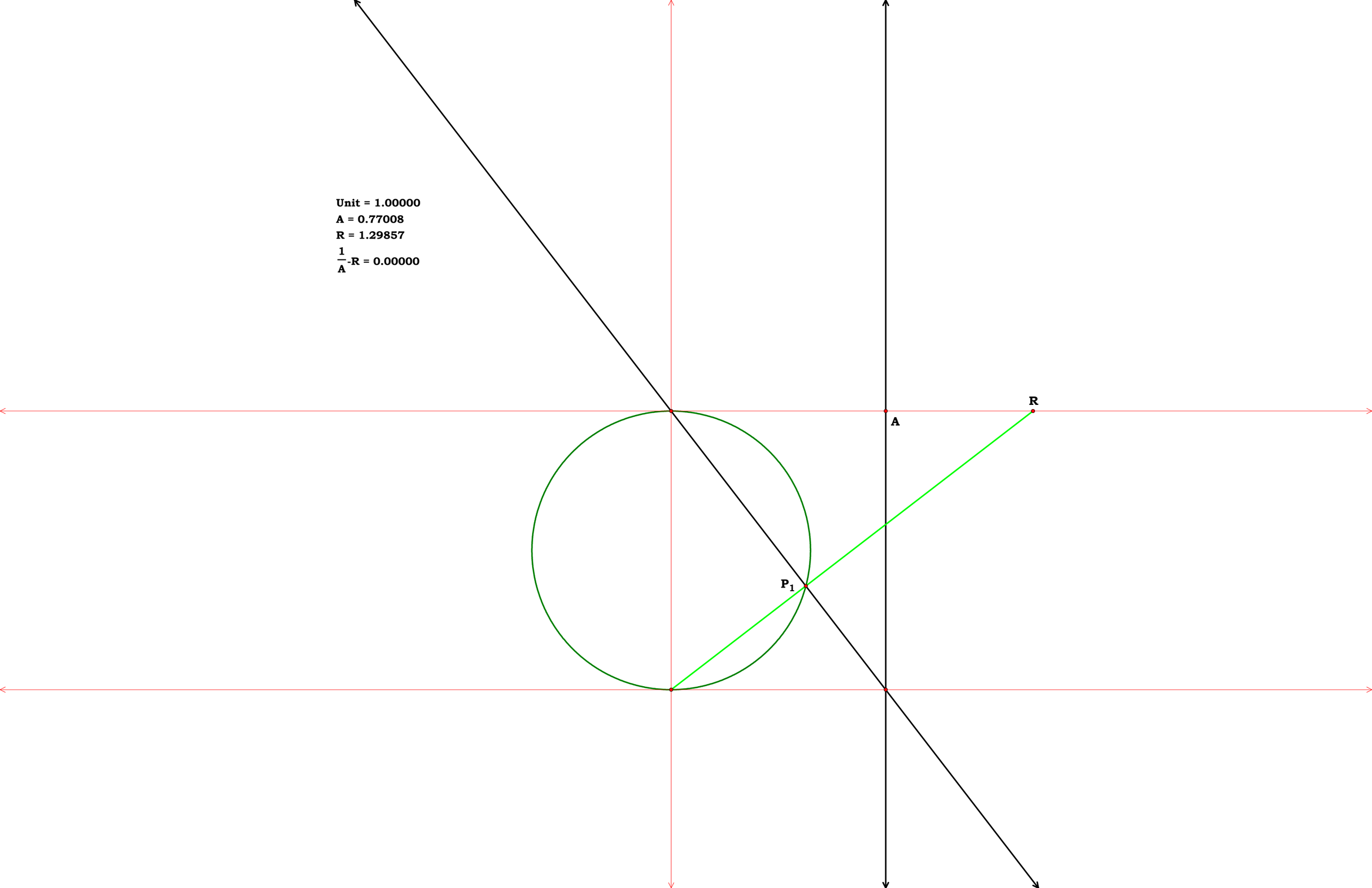
B

A

P_4

P_2

P_1


Unit = 1.00000
A = 0.77008
R = 1.29857
1/A-R = 0.00000
R
A
P1

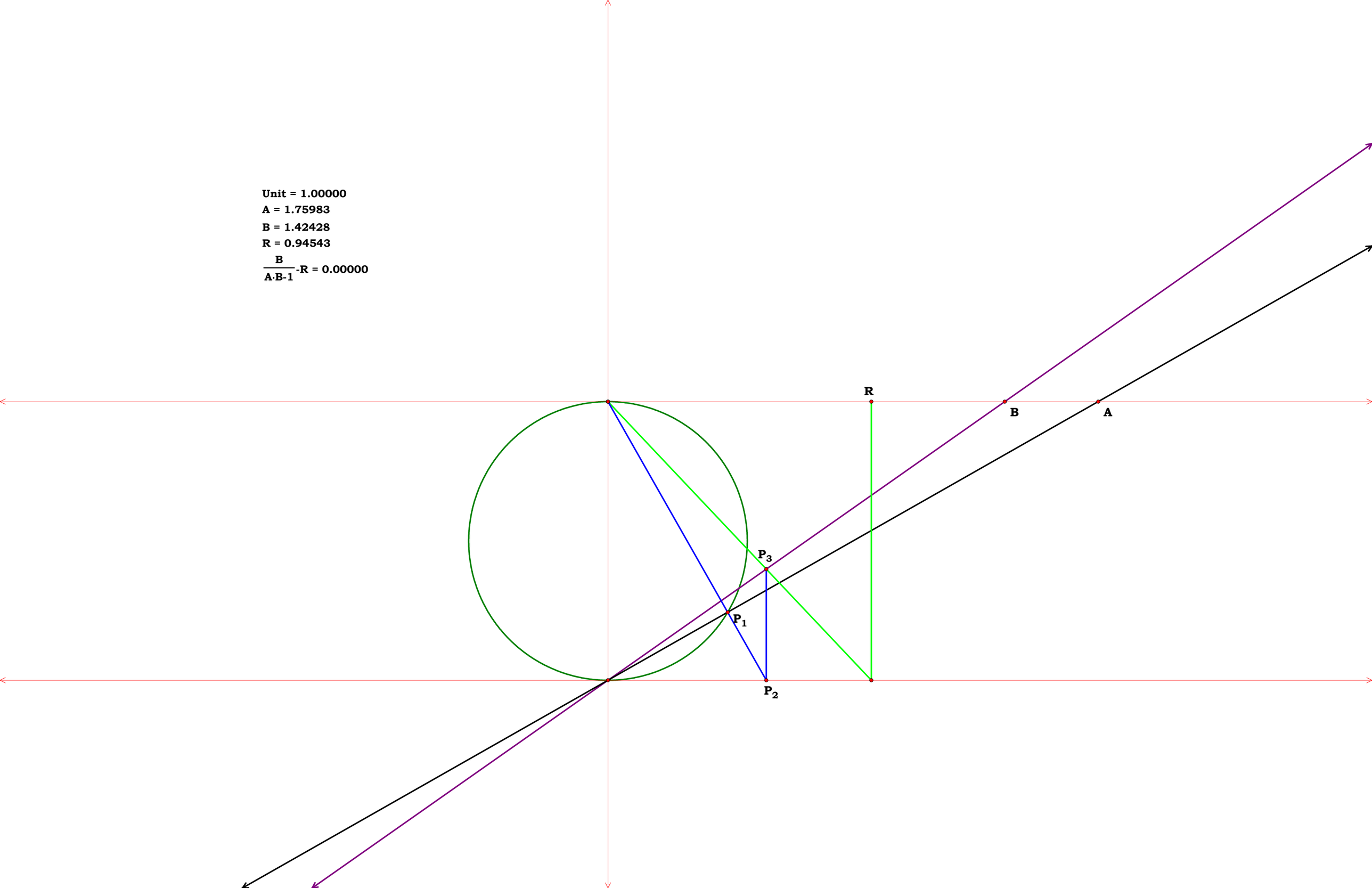
Unit = 1.00000

A = 1.75983

B = 1.42428

R = 0.94543

$\frac{B}{A \cdot B - 1} - R = 0.00000$



Unit = 1.00000

A = 1.45325

B = 0.87871

R = 0.59634

$\frac{A^2 \cdot B}{A^2+1}$-R = 0.00000

R

B

A

P_1

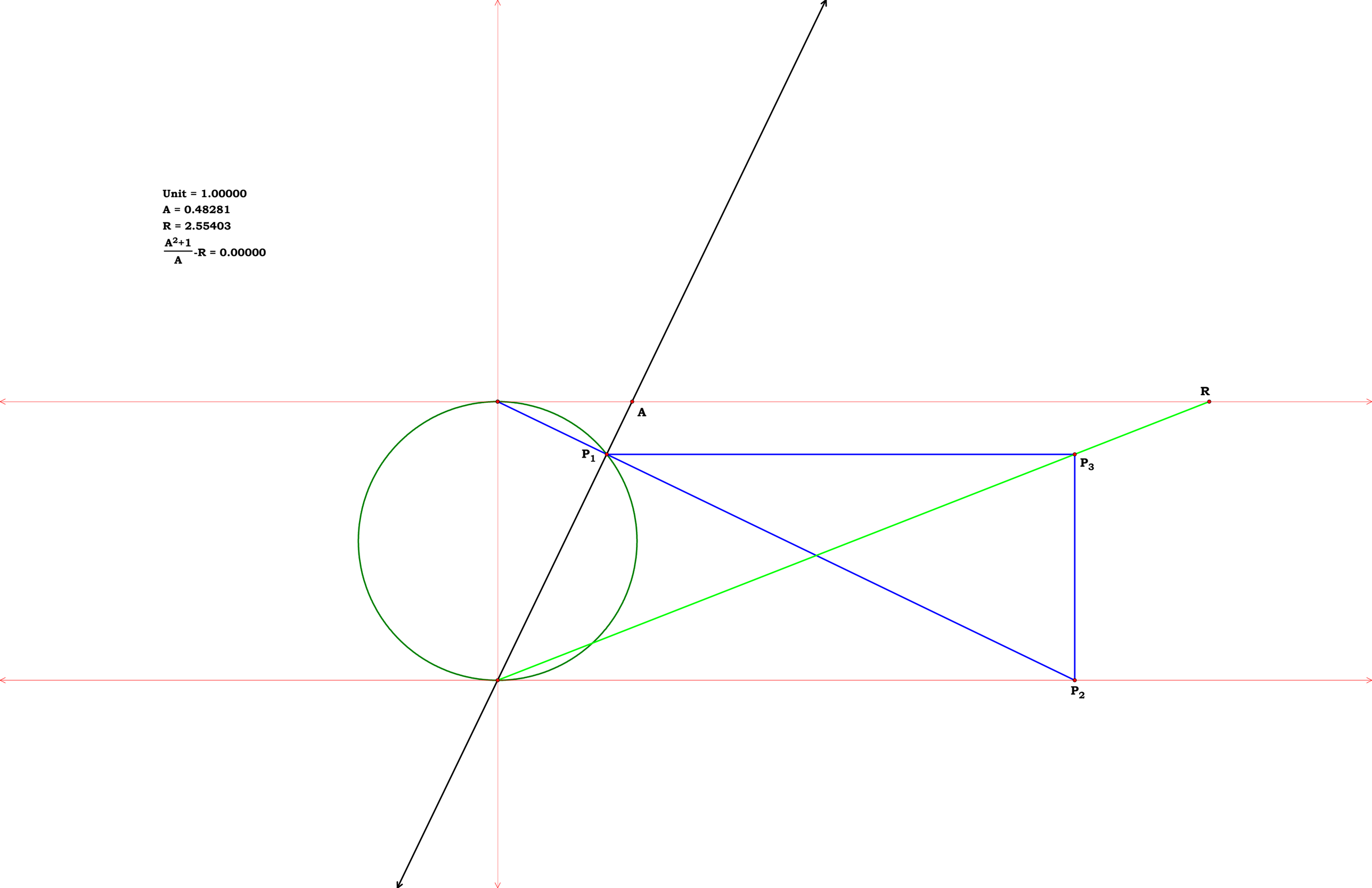
P_2

Unit = 1.00000

A = 0.48281

R = 2.55403

$\frac{A^2+1}{A}$-R = 0.00000



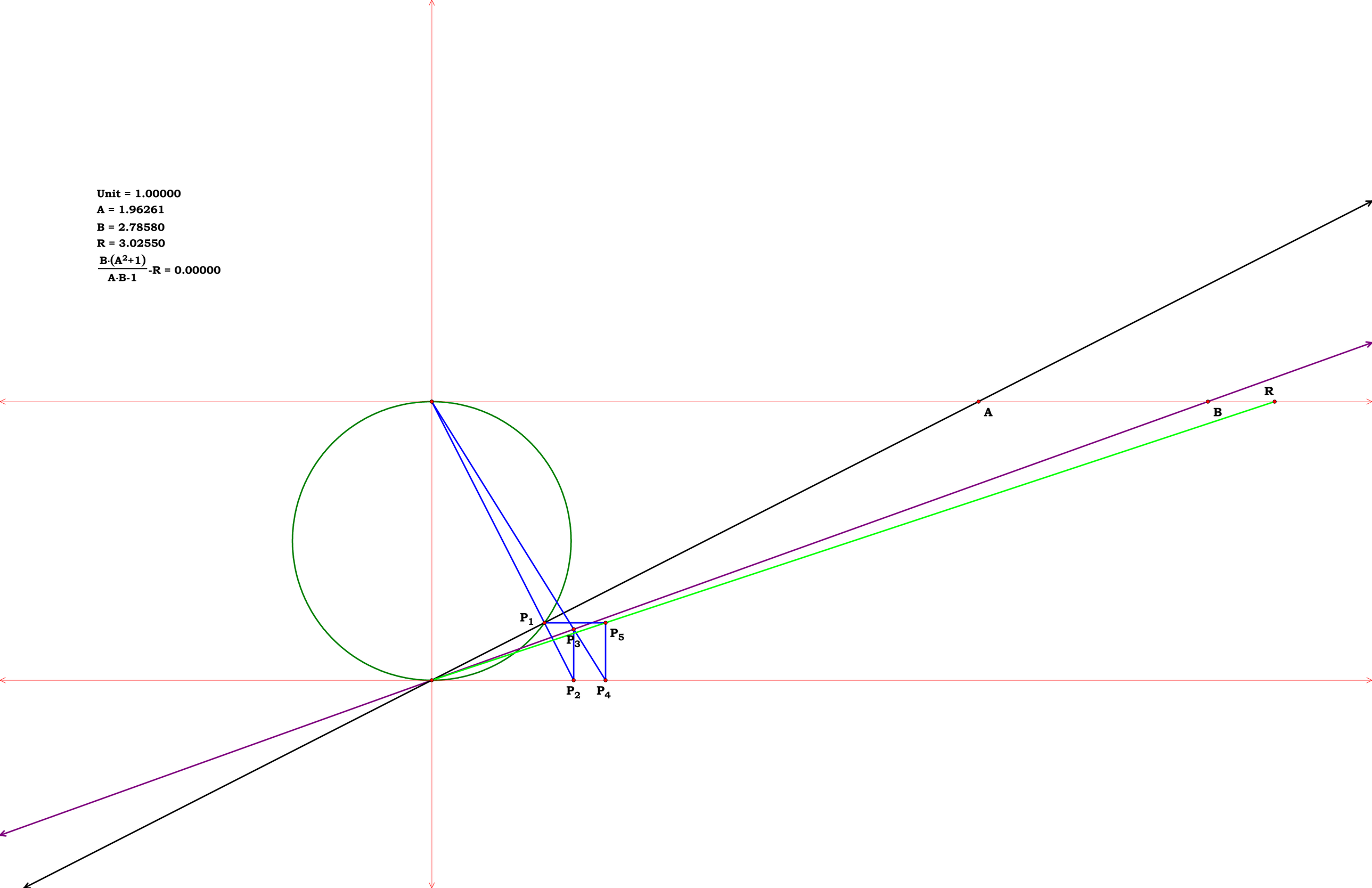
Unit = 1.00000

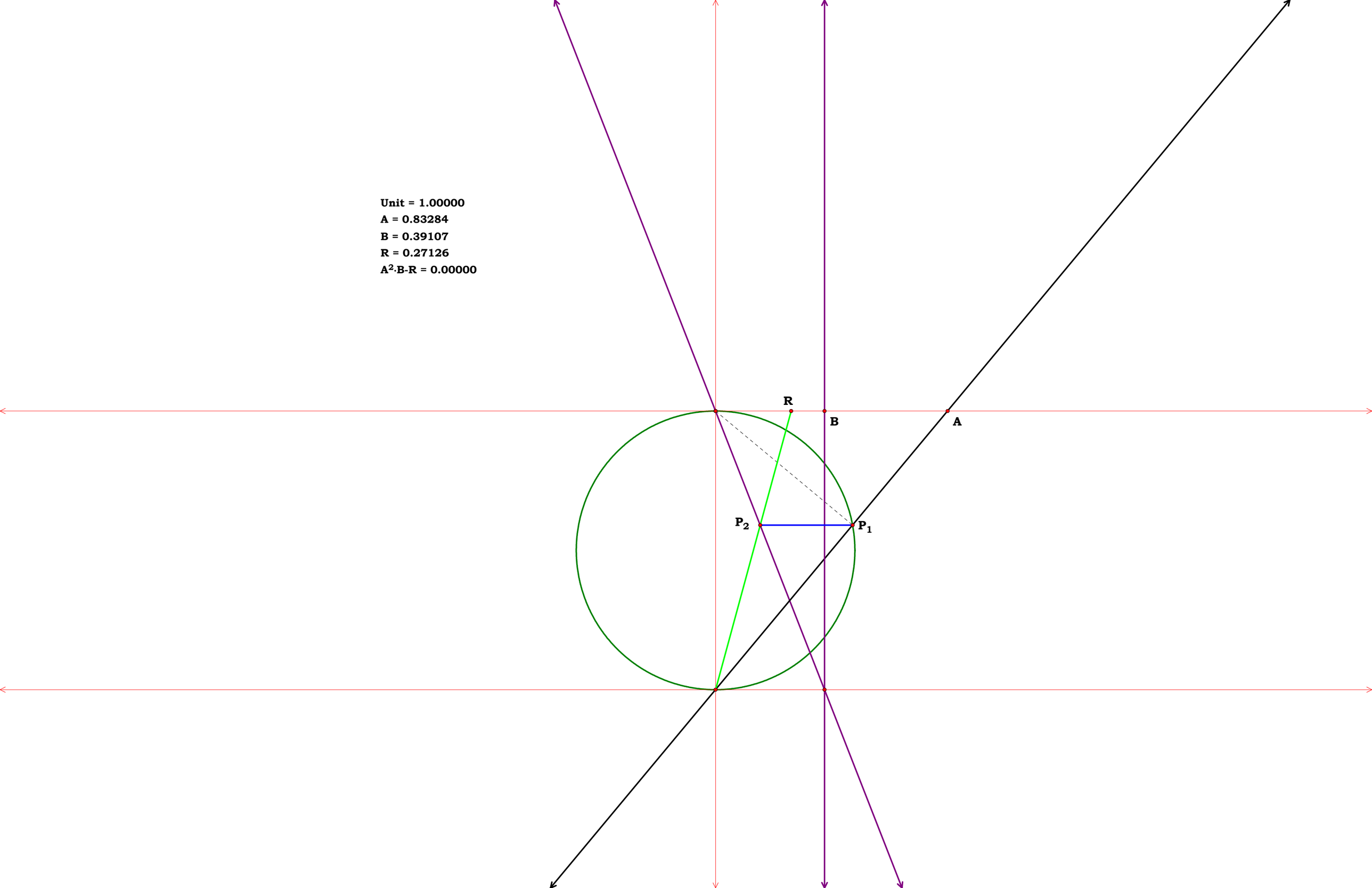
A = 1.96261

B = 2.78580

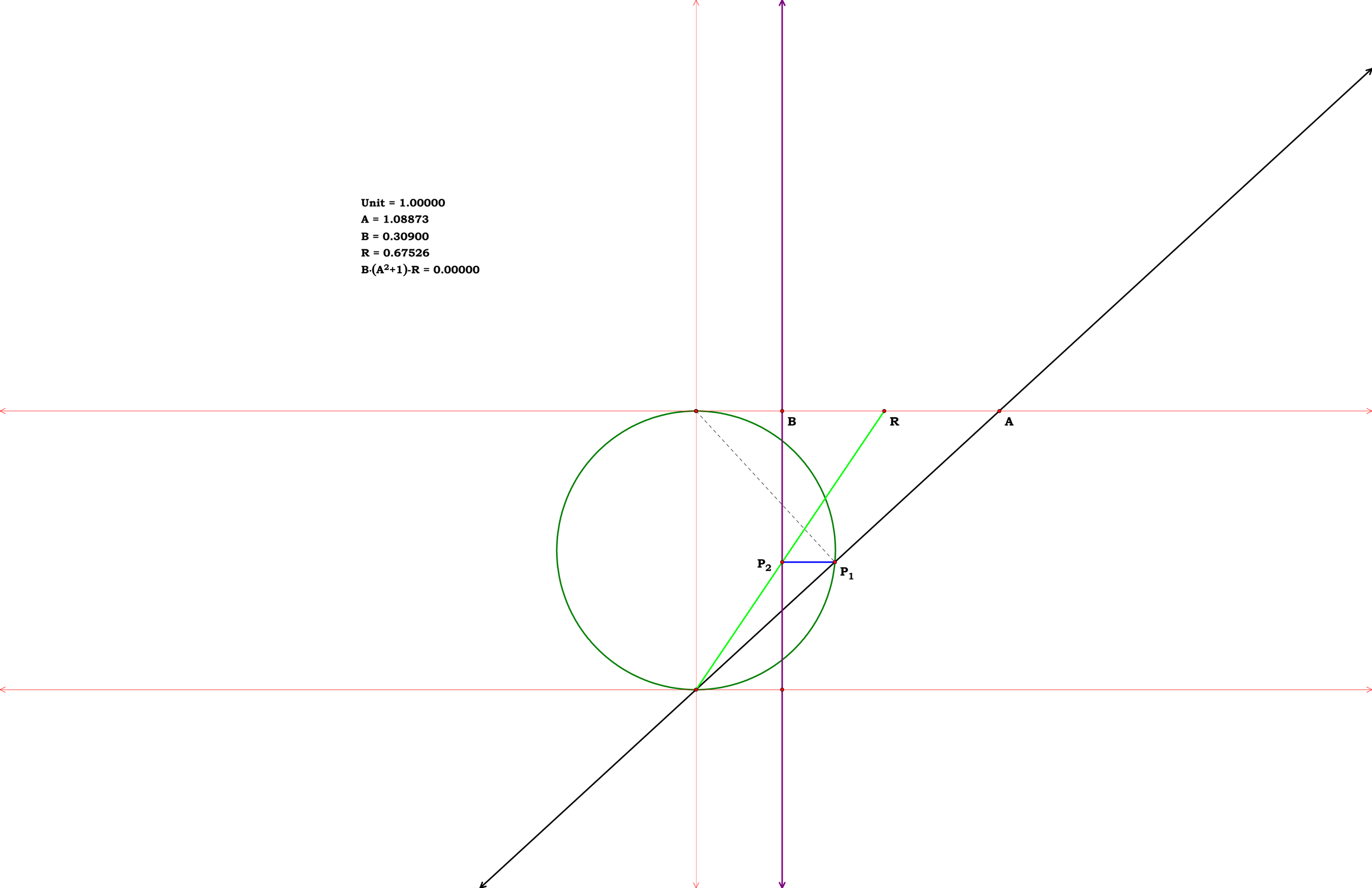
R = 3.02550

$\frac{B\cdot(A^2+1)}{A\cdot B-1}$-R = 0.00000




Unit = 1.00000
A = 0.83284
B = 0.39107
R = 0.27126
A²·B-R = 0.00000
R
B
A
P2
P1

Unit = 1.00000
A = 1.08873
B = 0.30900
R = 0.67526
B·(A²+1)-R = 0.00000

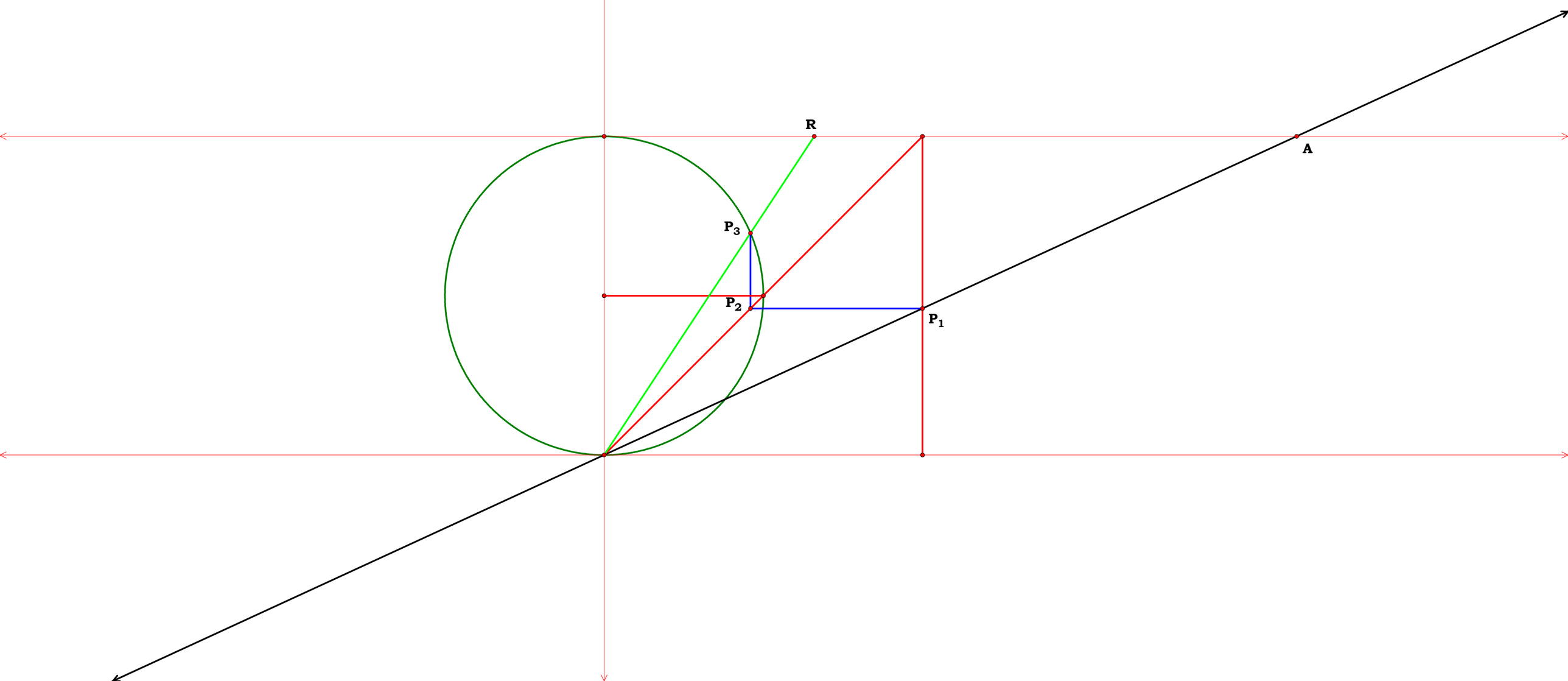


Unit = 1.00000

A = 2.17505

R = 0.66008

$$\frac{2\cdot\sqrt{A^2}}{A\cdot\left(\sqrt{A^2}+\sqrt{(A-2)\cdot(A+2)}\right)}-R = 0.00000$$

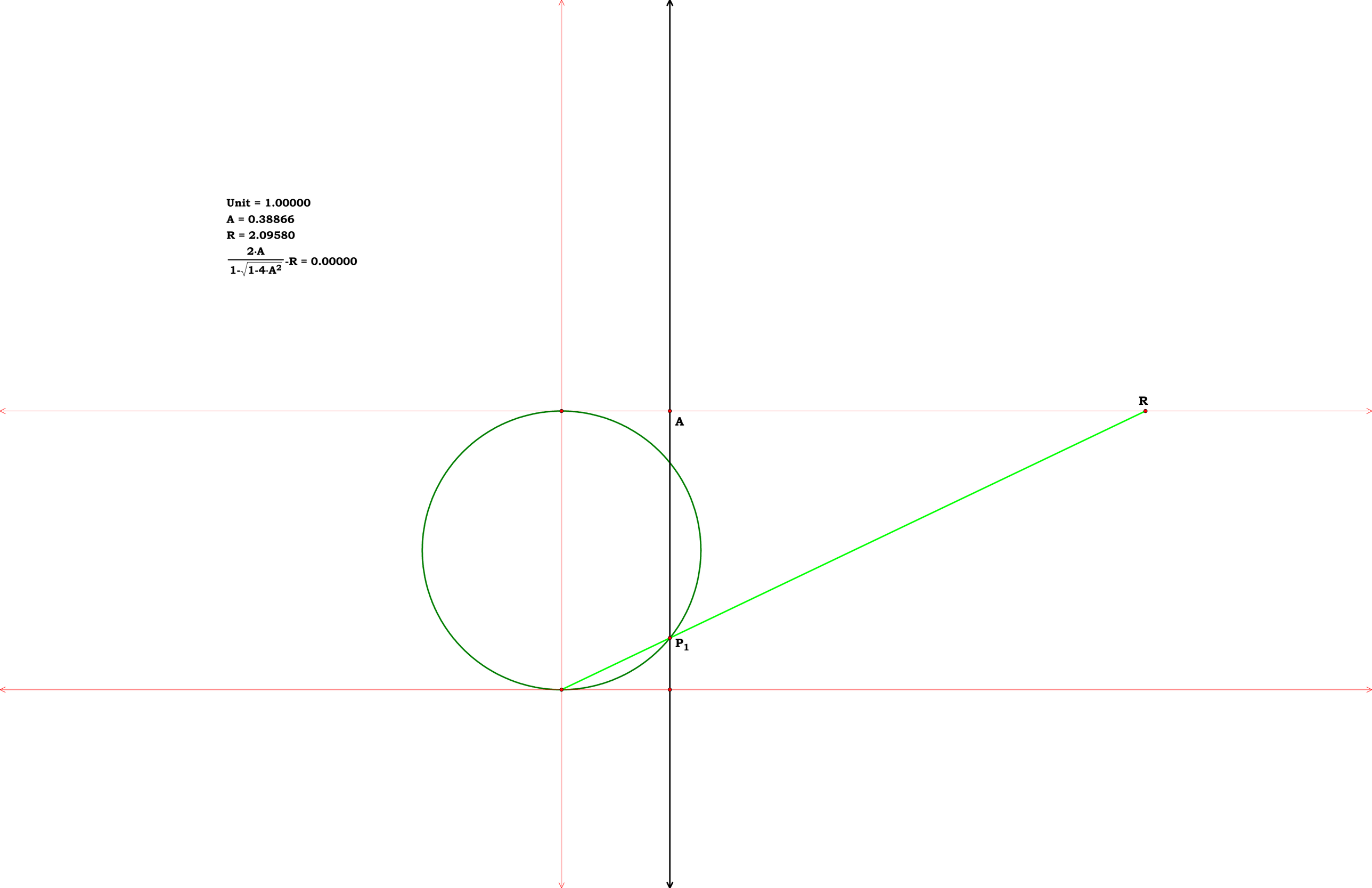


Unit = 1.00000

A = 0.38866

R = 2.09580

$$\frac{2 \cdot A}{1-\sqrt{1-4 \cdot A^2}} - R = 0.00000$$



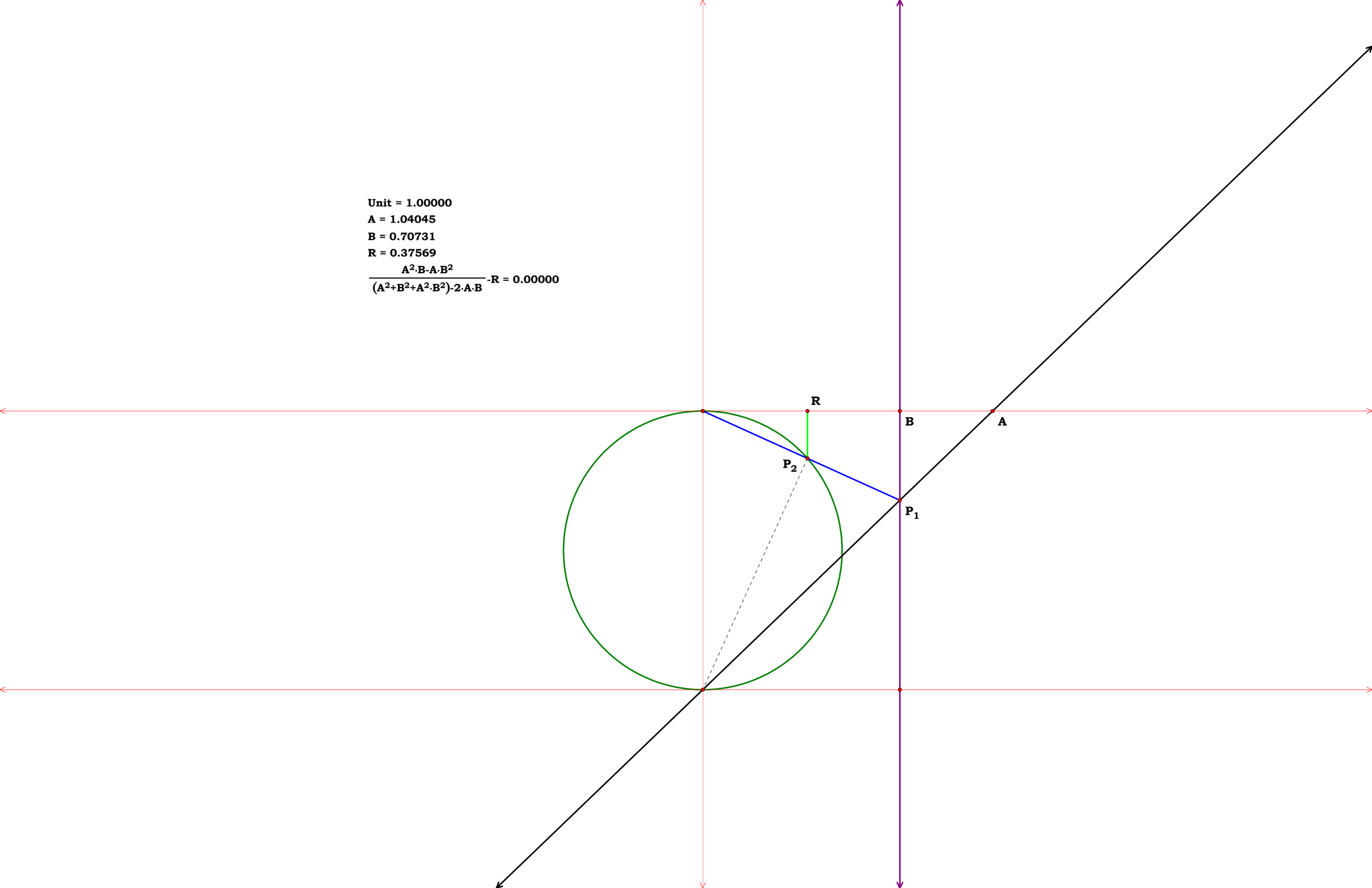
Unit = 1.00000

A = 1.04045

B = 0.70731

R = 0.37569

$$\frac{A^2 \cdot B - A \cdot B^2}{(A^2 + B^2 + A^2 \cdot B^2) - 2 \cdot A \cdot B} - R = 0.00000$$



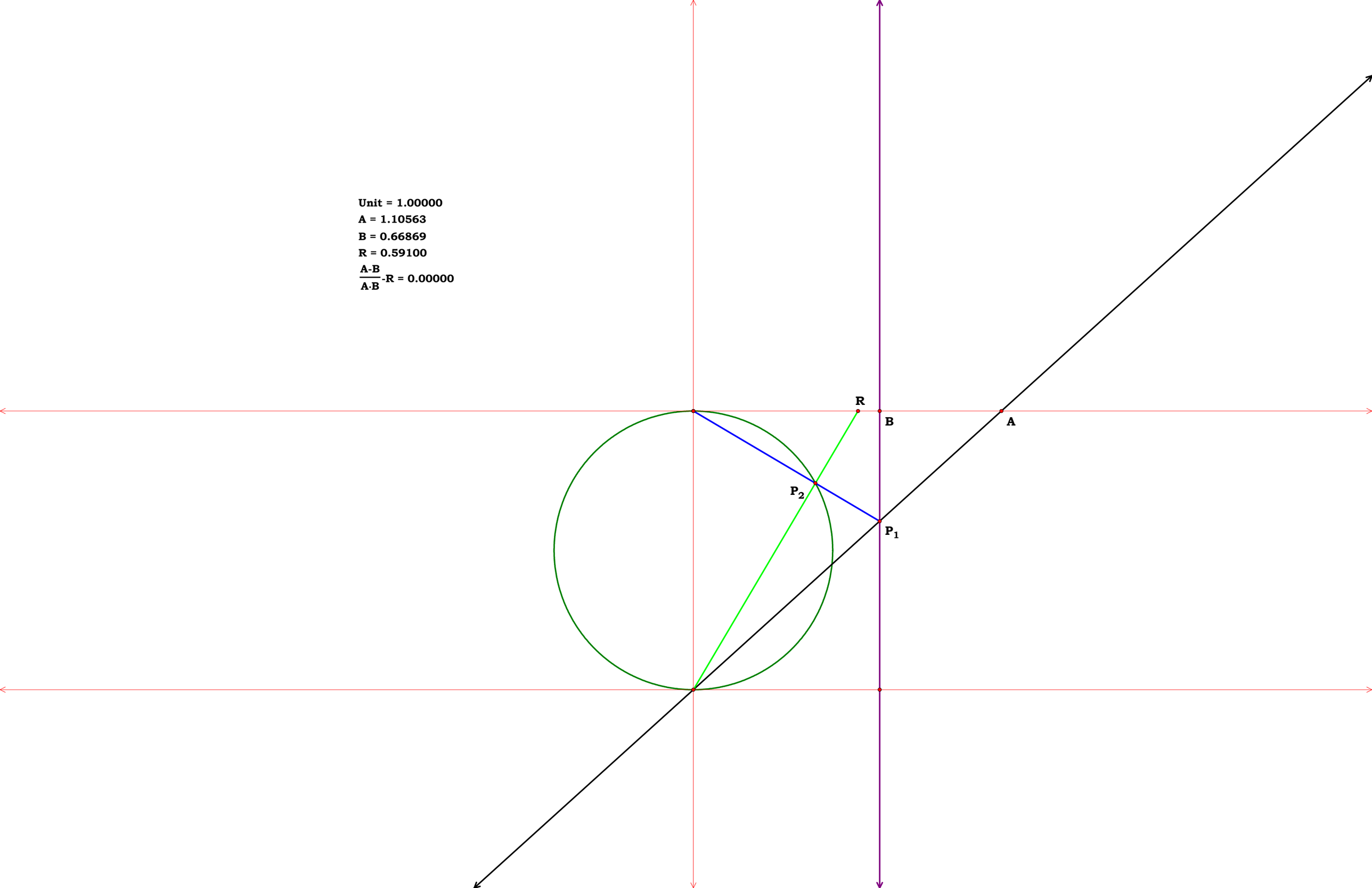
Unit = 1.00000

A = 1.10563

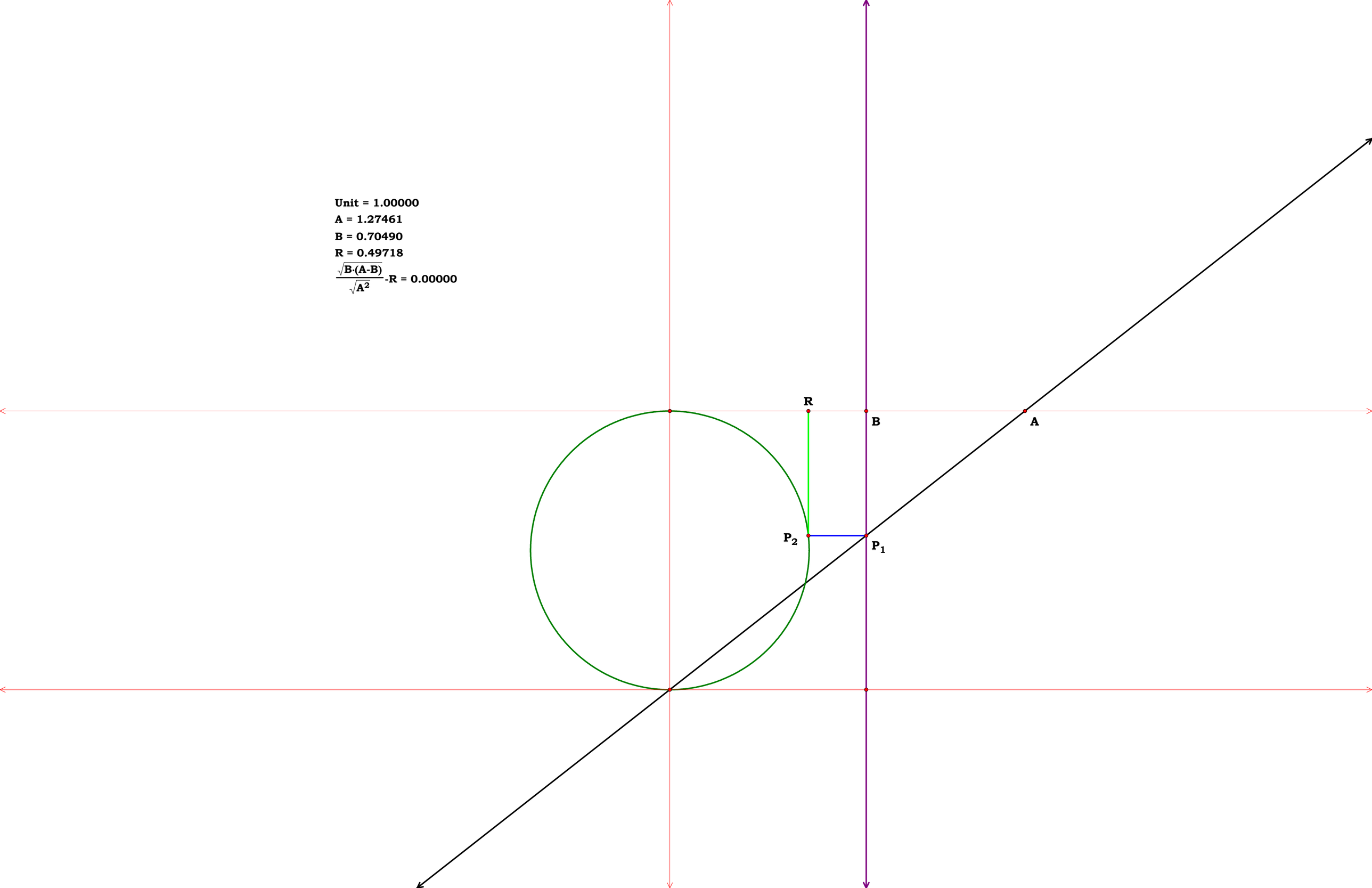
B = 0.66869

R = 0.59100

$\frac{A-B}{A \cdot B} - R = 0.00000$



Unit = 1.00000
A = 1.27461
B = 0.70490
R = 0.49718
$\frac{\sqrt{B\cdot(A-B)}}{\sqrt{A^2}}$**-R = 0.00000**



Unit = 1.00000

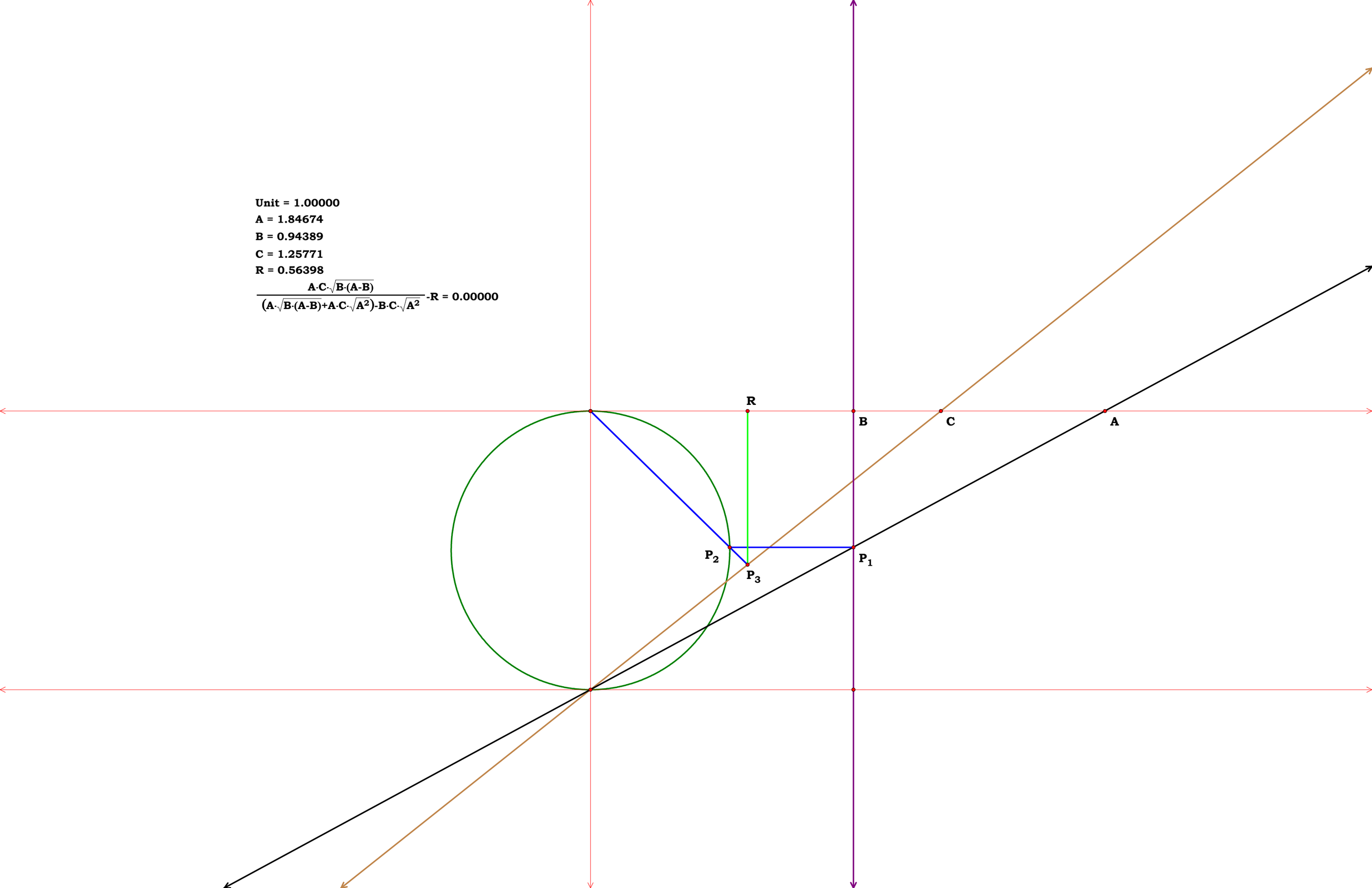
A = 1.84674

B = 0.94389

C = 1.25771

R = 0.56398

$$\frac{A \cdot C \cdot \sqrt{B \cdot (A-B)}}{\left(A \cdot \sqrt{B \cdot (A-B)} + A \cdot C \cdot \sqrt{A^2}\right) - B \cdot C \cdot \sqrt{A^2}} - R = 0.00000$$



Unit = 1.00000

A = -0.55523

B = -0.29934

R = 0.92457

$\frac{A\cdot\sqrt{B\cdot(A-B)}}{\sqrt{A^2\cdot B}}-R = 0.00000$

A

B

R

P_1

P_2

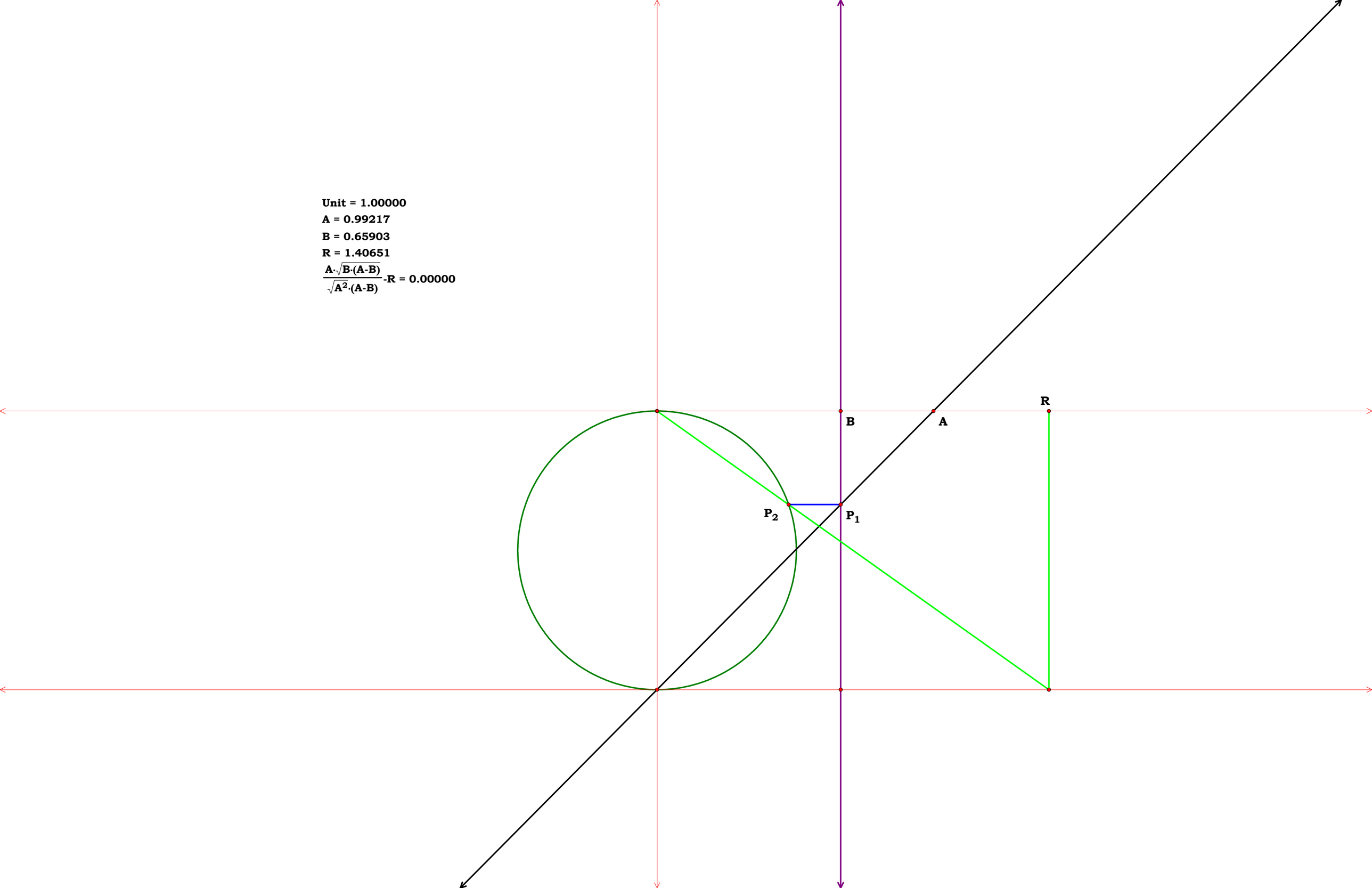
Unit = 1.00000

A = 0.99217

B = 0.65903

R = 1.40651

$\frac{A\cdot\sqrt{B\cdot(A-B)}}{\sqrt{A^2\cdot(A-B)}}-R = 0.00000$



Unit = 1.00000

A = 1.10080

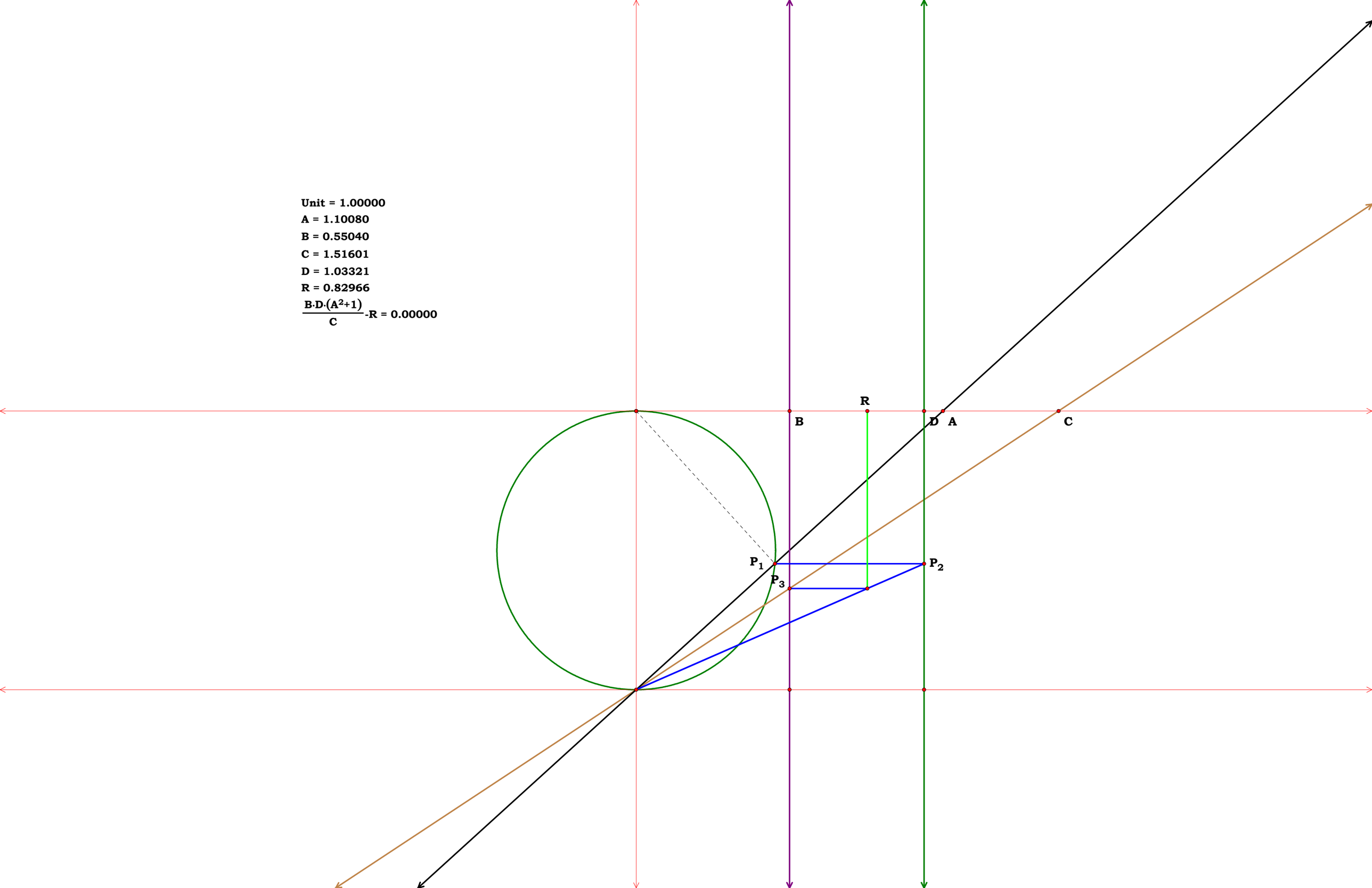
B = 0.55040

C = 1.51601

D = 1.03321

R = 0.82966

$\frac{B \cdot D \cdot (A^2+1)}{C}$ -R = 0.00000



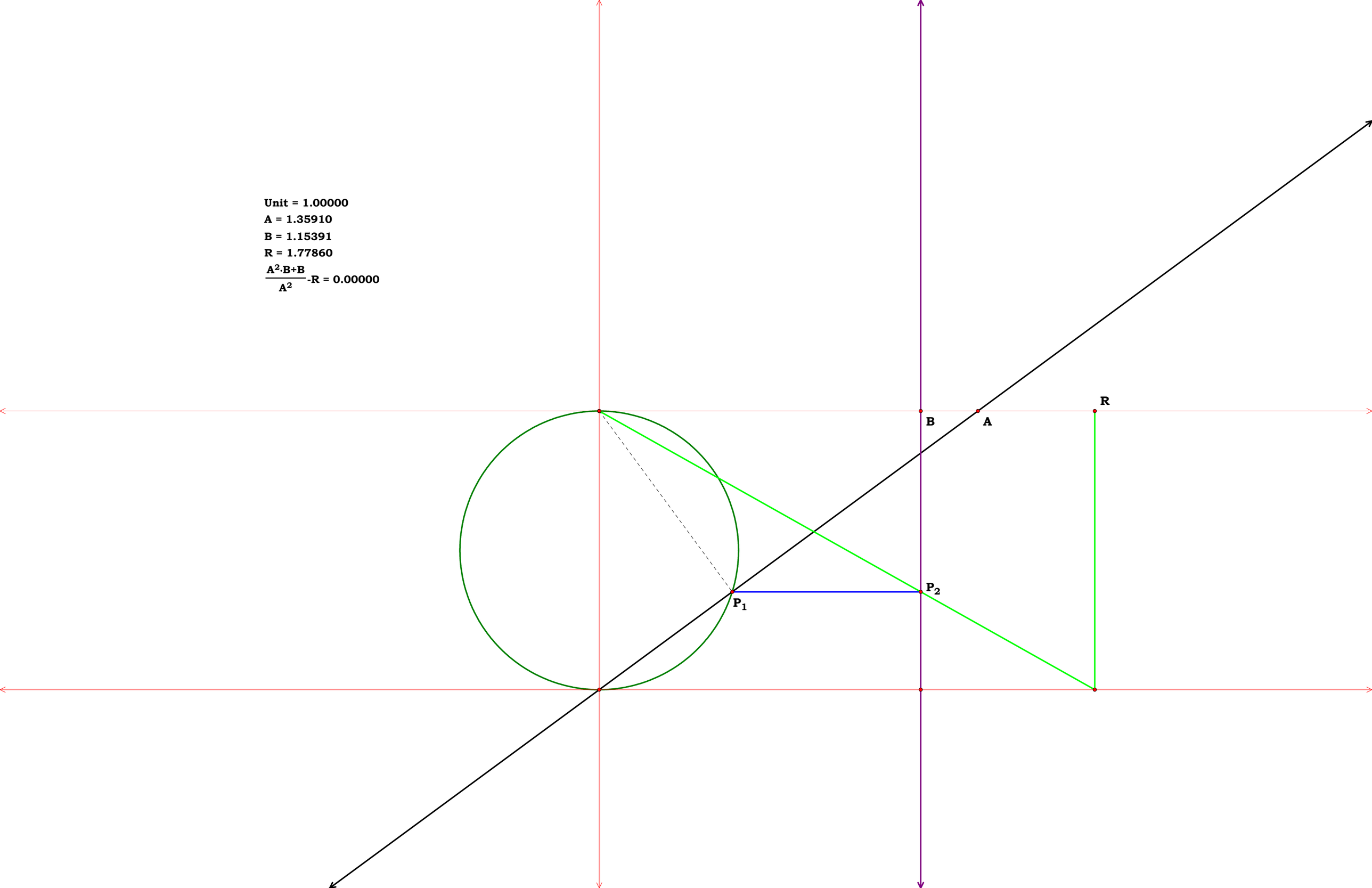
Unit = 1.00000

A = 1.35910

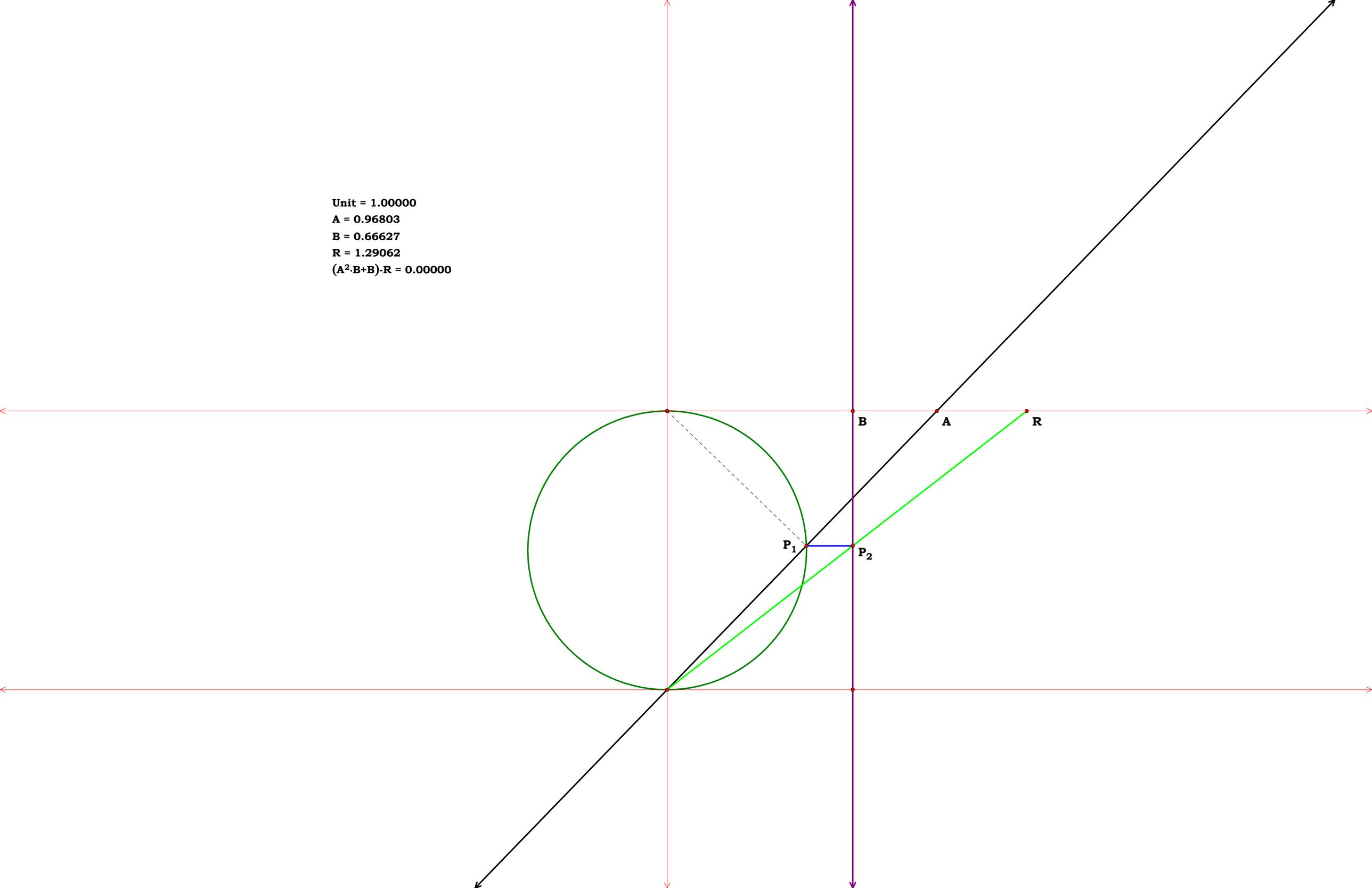
B = 1.15391

R = 1.77860

$\frac{A^2 \cdot B+B}{A^2}$-R = 0.00000



Unit = 1.00000
A = 0.96803
B = 0.66627
R = 1.29062
$(A^2 \cdot B+B)-R$ = 0.00000



Unit = 1.00000

A = 1.31082

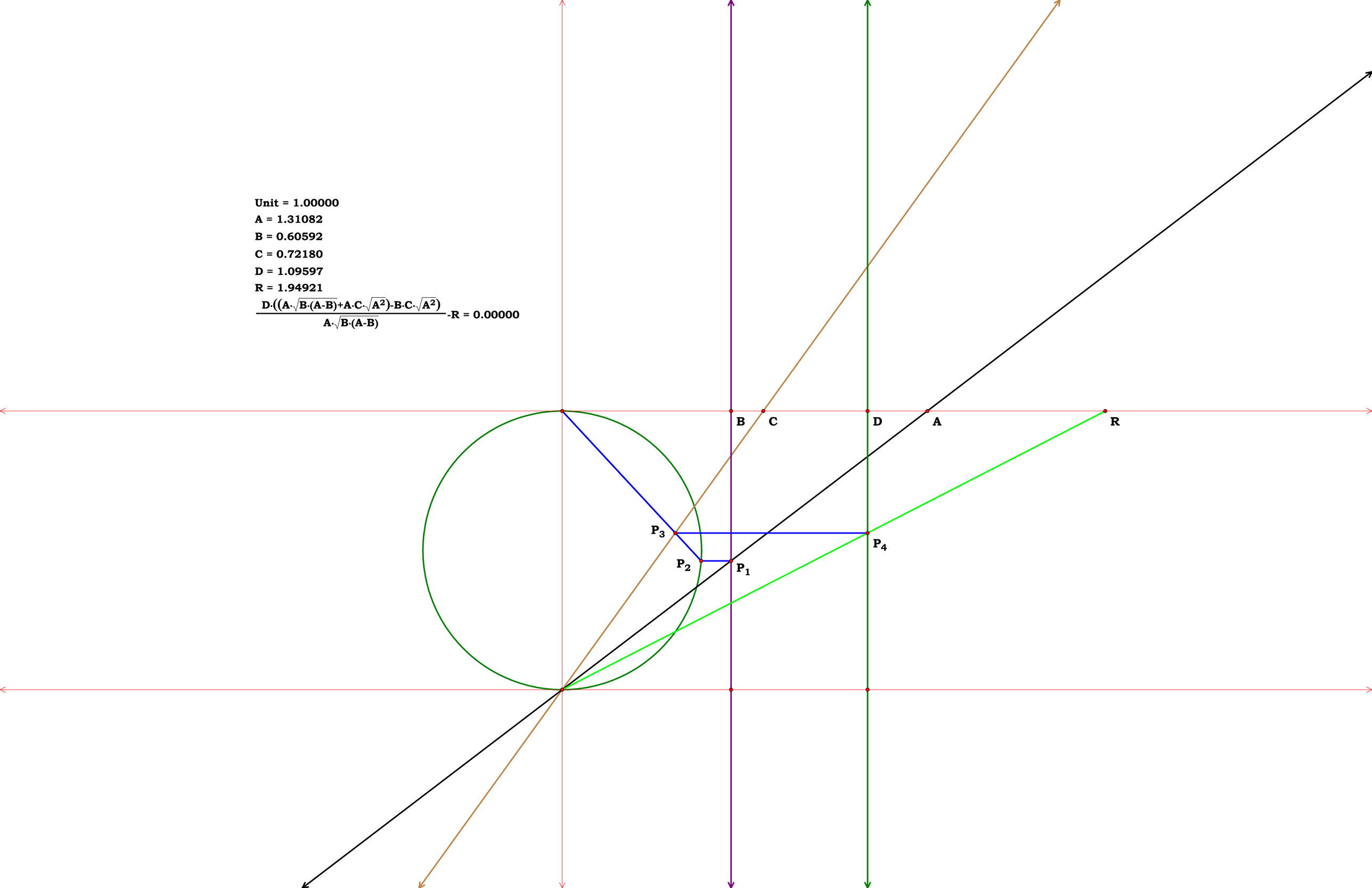
B = 0.60592

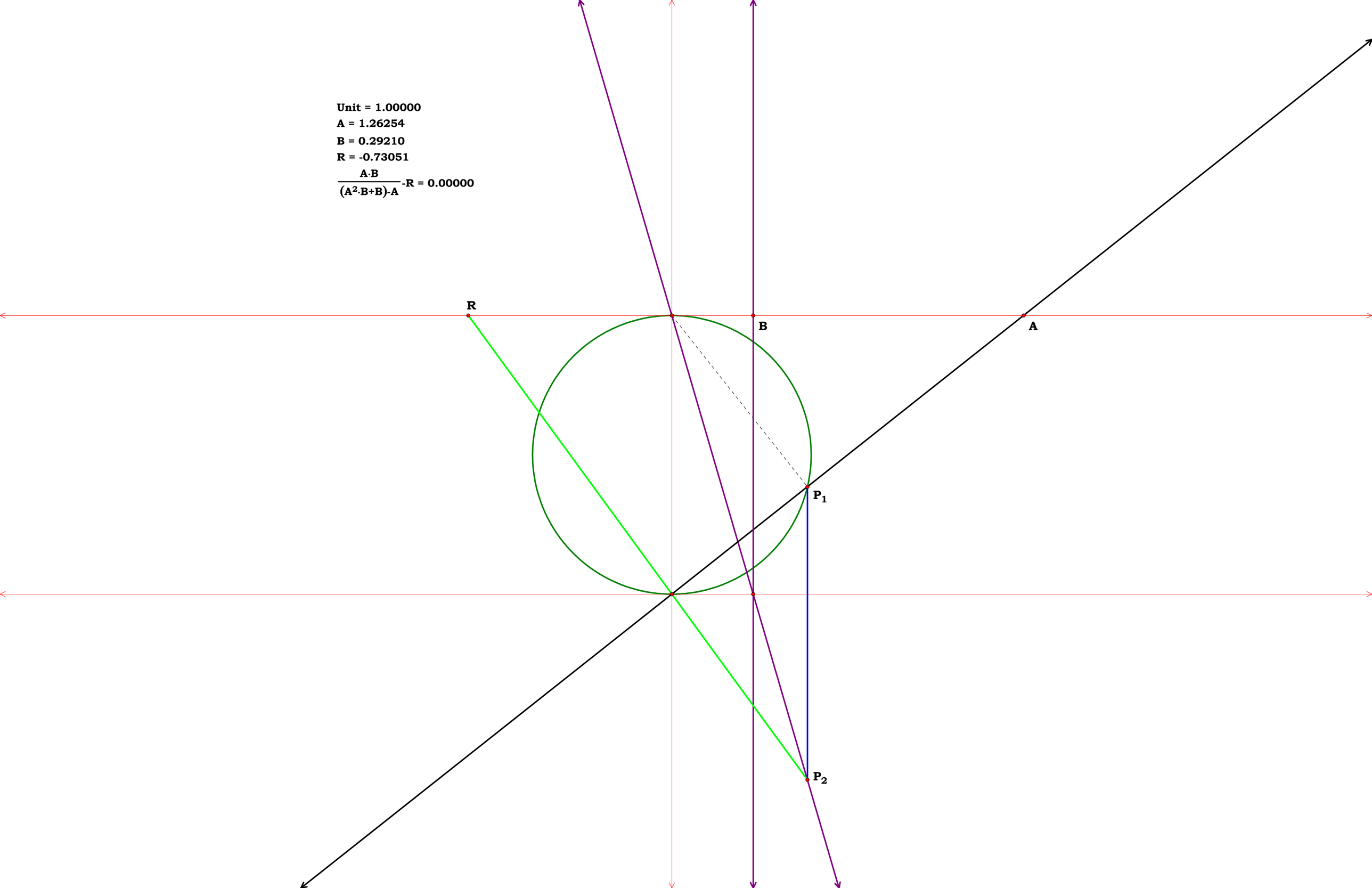
C = 0.72180

D = 1.09597

R = 1.94921

$$\frac{D\cdot\left(\left(A\cdot\sqrt{B\cdot(A-B)}+A\cdot C\cdot\sqrt{A^2}\right)-B\cdot C\cdot\sqrt{A^2}\right)}{A\cdot\sqrt{B\cdot(A-B)}}-R = 0.00000$$




Unit = 1.00000
A = 1.26254
B = 0.29210
R = -0.73051
$\frac{A \cdot B}{(A^2 \cdot B + B) - A} - R = 0.00000$
R
B
A
P_1
P_2

Unit = 1.00000

A = 0.84491

B = 0.39590

R = 0.68452

$\frac{(A+B)\cdot\sqrt{A\cdot B}}{A\cdot\sqrt{(A+B)^2}}$ -R = 0.00000

B

R

A

P_1

P_2

Unit = 1.00000

A = 0.94147

B = 0.63731

R = 1.90027

$$\frac{B\cdot(A^2+1)\cdot\sqrt{A\cdot((A^2\cdot B-A)+B)}}{((A^2\cdot B-A)+B)\cdot\sqrt{B^2\cdot(A^2+1)^2}}-R = 0.00000$$

B

A

R

P_1

P_2

P_3

Unit = 1.00000

A = 1.61499

B = 0.86422

C = 1.34945

R = 0.99356

$$\frac{(A+B)\cdot\sqrt{B\cdot C\cdot\sqrt{A\cdot B}\cdot\sqrt{(A+B)^2}}}{\sqrt{A\cdot B}\cdot\sqrt{\sqrt{(A+B)^{23}}}} - R = 0.00000$$

If one does not pay attention to this construction closely(, they will not actually (P2 and 4) construct it when all vals go into the neg.

B

R

C

A

P_4

P_3

P_2

P_1

Unit = 1.00000

A = 1.60533

B = 1.01872

C = 1.22150

D = 1.36634

R = 1.16095

$$\frac{(A+B)\cdot\sqrt{B\cdot C\cdot D\cdot(A+B)}}{(A+B)^{\frac{3}{2}}\cdot(B\cdot C\cdot\sqrt{A\cdot B})^{\frac{1}{4}}}-R = 0.00000$$

B R C D A

Unit = 1.00000

A = 1.50394

B = 1.02597

C = 1.11287

D = 1.22633

R = 0.92225

$$\frac{B^{\frac{5}{8}}\cdot C\cdot(A+B)\cdot\sqrt{D\cdot(A+B)\cdot\sqrt{C\cdot\sqrt{A\cdot B\cdot(A+B)}}}}{D\cdot(A+B)^{\frac{7}{8}}\cdot(B\cdot C)^{\frac{3}{2}}}-R = 0.00000$$

R B C D A

P_1 P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 1.37117

B = 0.95596

C = 1.13942

R = 1.02523

$$\frac{\sqrt{C\cdot\sqrt{A\cdot B}\cdot(A+B)}}{C\cdot\sqrt{B\cdot(A+B)}}-R = 0.00000$$

B R C A

P_4 P_3 P_2 P_1

Unit = 1.00000

A = 1.53050

B = 1.01389

C = 1.18288

R = 0.64866

$\frac{C\cdot((A^2\cdot B-A)+B)}{B\cdot(A^2+1)}$-R = 0.00000

Hide Line

R

B

C

A

P_1

P_1

P_1

Unit = 1.00000

A = 0.47315

B = 0.96803

R = 0.69913

$\frac{\sqrt{A \cdot B}}{B}$-R = 0.00000

A

R

B

P_2

P_4

P_3

P_1

Unit = 1.00000

A = 0.94872

B = 0.35969

C = 1.65844

R = 0.60694

$$\frac{\sqrt{C\cdot\sqrt{A\cdot B}\cdot\sqrt{(A+B)^2-A\cdot B}}}{\left(\sqrt{(A\cdot C)^2-\sqrt{A\cdot B}}+\sqrt{(B\cdot C)^2}\right.}-R = 0.00000$$

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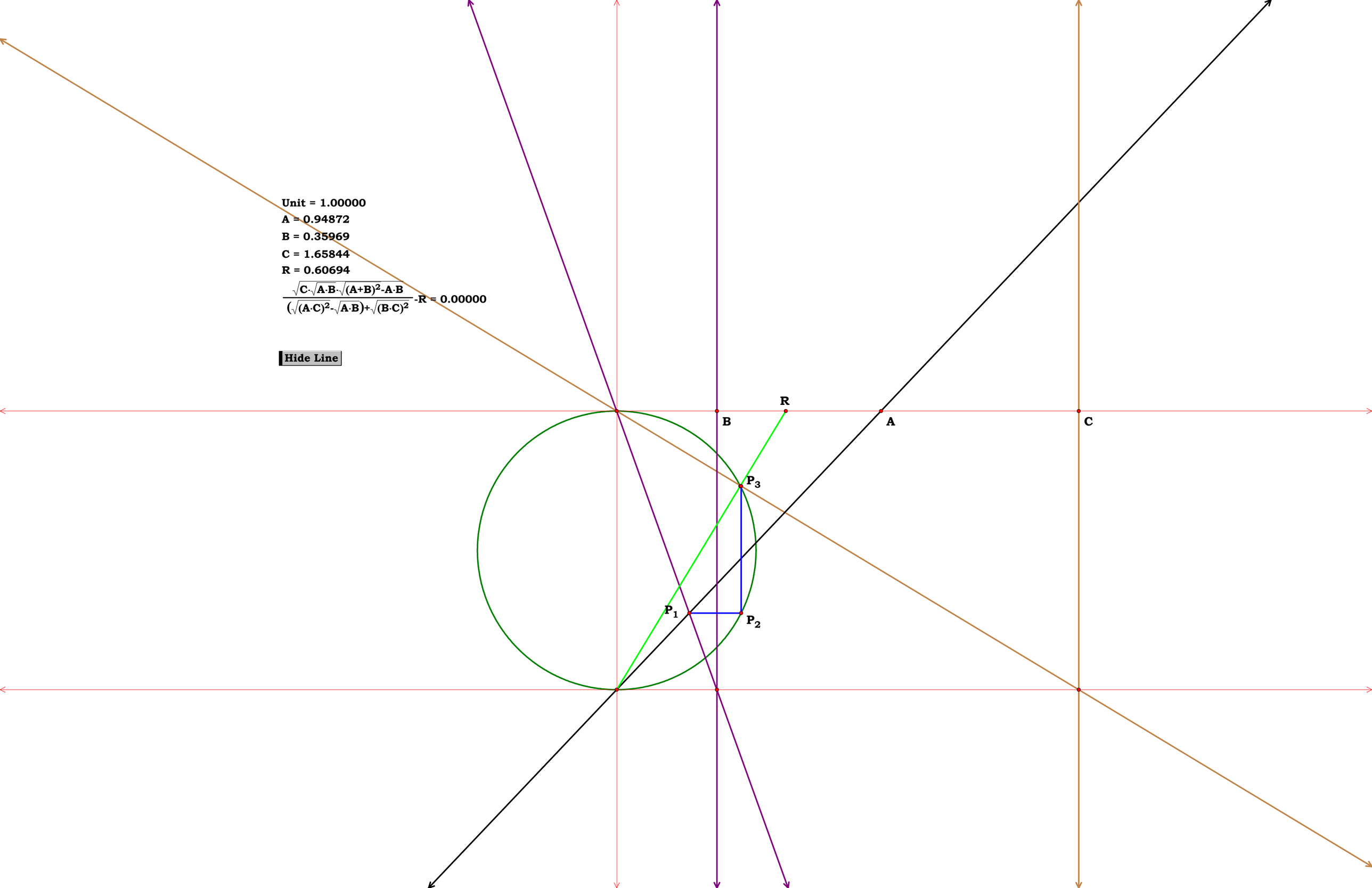


Unit = 1.00000

A = 2.35127

B = 0.88837

C = 0.69041

R = 1.16117

$\frac{B \cdot C \cdot (A^2+1)}{(A^2 \cdot B - A)+B} - R = 0.00000$

C

B

R

A

P_2

P_3

P_1

Unit = 1.00000

A = 0.91975

B = 0.65420

C = 1.31565

D = 1.11046

R = 1.77557

$$\frac{C \cdot D \cdot \sqrt{(A+B)^2}}{C \cdot \sqrt{(A+B)^2} - \sqrt{A \cdot B}} - R = 0.00000$$

B

A

D

C

R

P_1

P_2

P_3

P_4

Unit = 1.00000

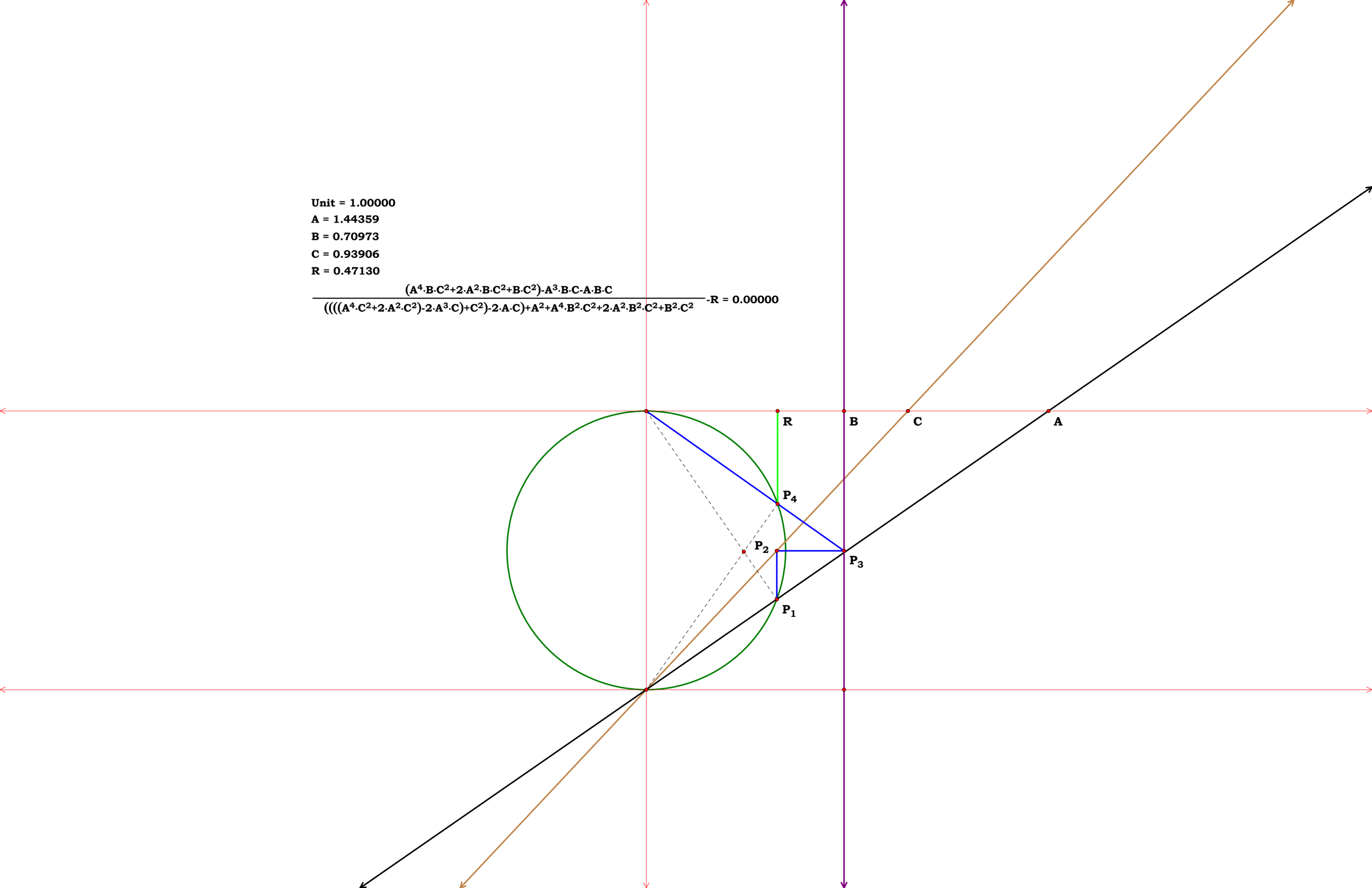
A = 1.44359

B = 0.70973

C = 0.93906

R = 0.47130

$$\frac{(A^4\cdot B\cdot C^2+2\cdot A^2\cdot B\cdot C^2+B\cdot C^2)-A^3\cdot B\cdot C-A\cdot B\cdot C}{((((A^4\cdot C^2+2\cdot A^2\cdot C^2)-2\cdot A^3\cdot C)+C^2)-2\cdot A\cdot C)+A^2+A^4\cdot B^2\cdot C^2+2\cdot A^2\cdot B^2\cdot C^2+B^2\cdot C^2}-R = 0.00000$$



Unit = 1.00000

A = 1.19495

B = 0.73628

C = 0.79180

D = 2.02779

R = 0.57396

$$\frac{2\cdot B\cdot C\cdot D\cdot\sqrt{A^2}}{A\cdot D\cdot\sqrt{A^2-4\cdot B^2\cdot C^2}+\sqrt{A^2}\cdot(A\cdot D+2\cdot B\cdot C)}-R = 0.00000$$

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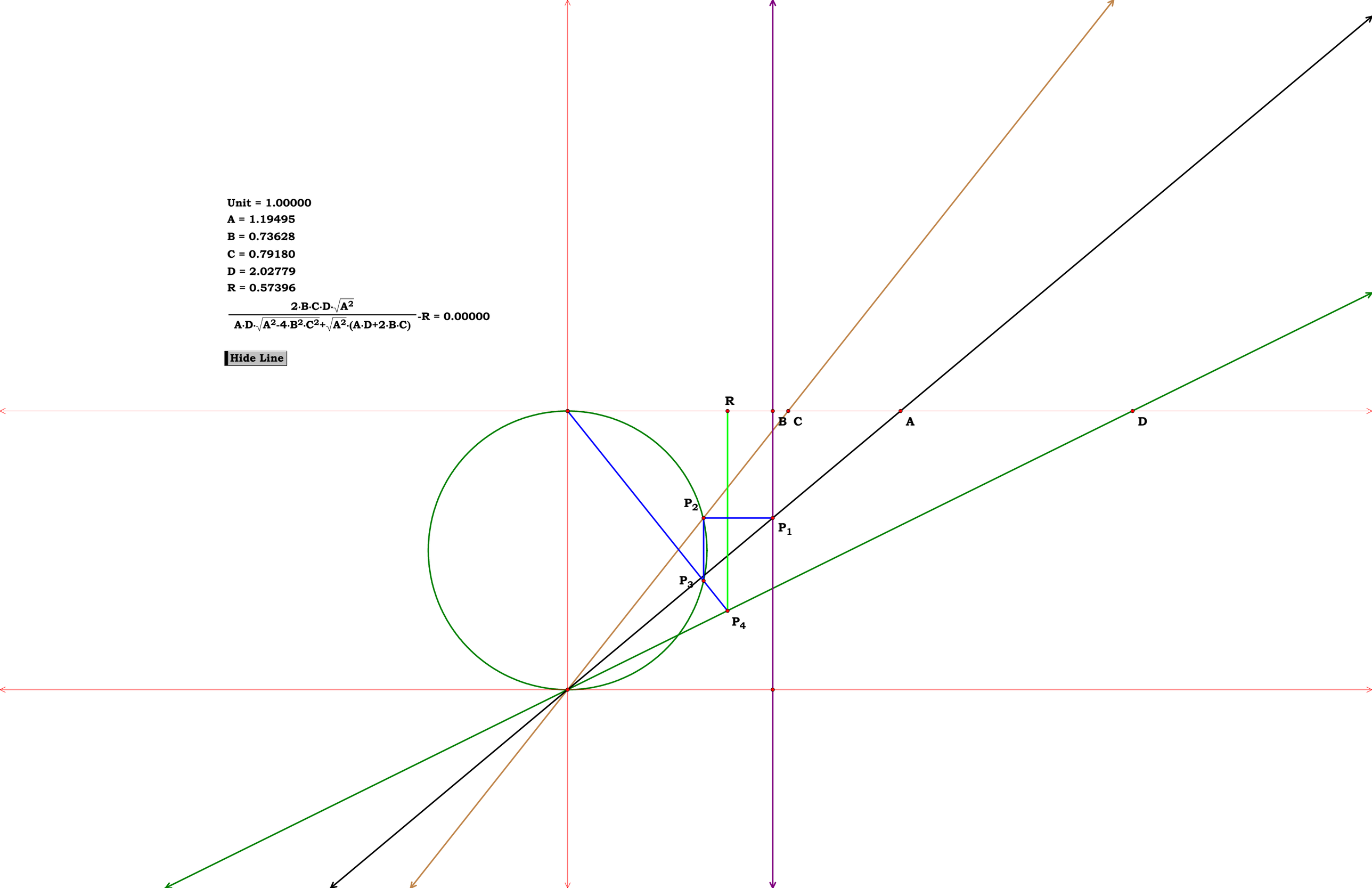

Unit = 1.00000

A = 1.41704

B = 0.83526

C = 0.62765

R = 0.29864

$\frac{(A^2 \cdot C + C) - A}{A^2 \cdot B \cdot C + B \cdot C} - R = 0.00000$

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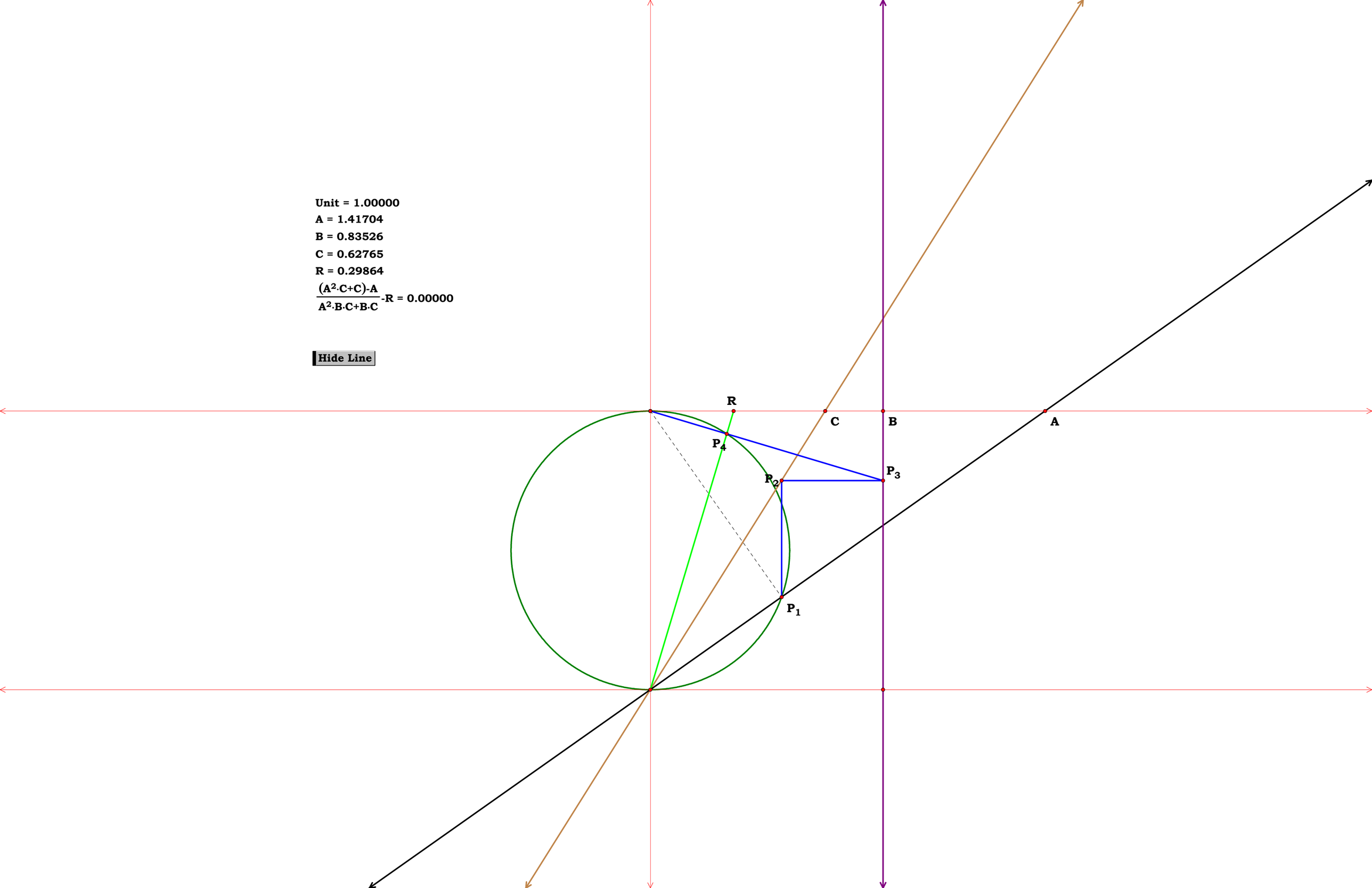

Unit = 1.00000

A = 1.42428

B = 0.66145

C = 0.94147

R = 0.58881

$$\frac{2 \cdot A \cdot B \cdot C}{\left(\sqrt{A^2 - 4 \cdot B^2 \cdot C^2} + \sqrt{A^2}\right) \cdot \sqrt{A^2}} - R = 0.00000$$

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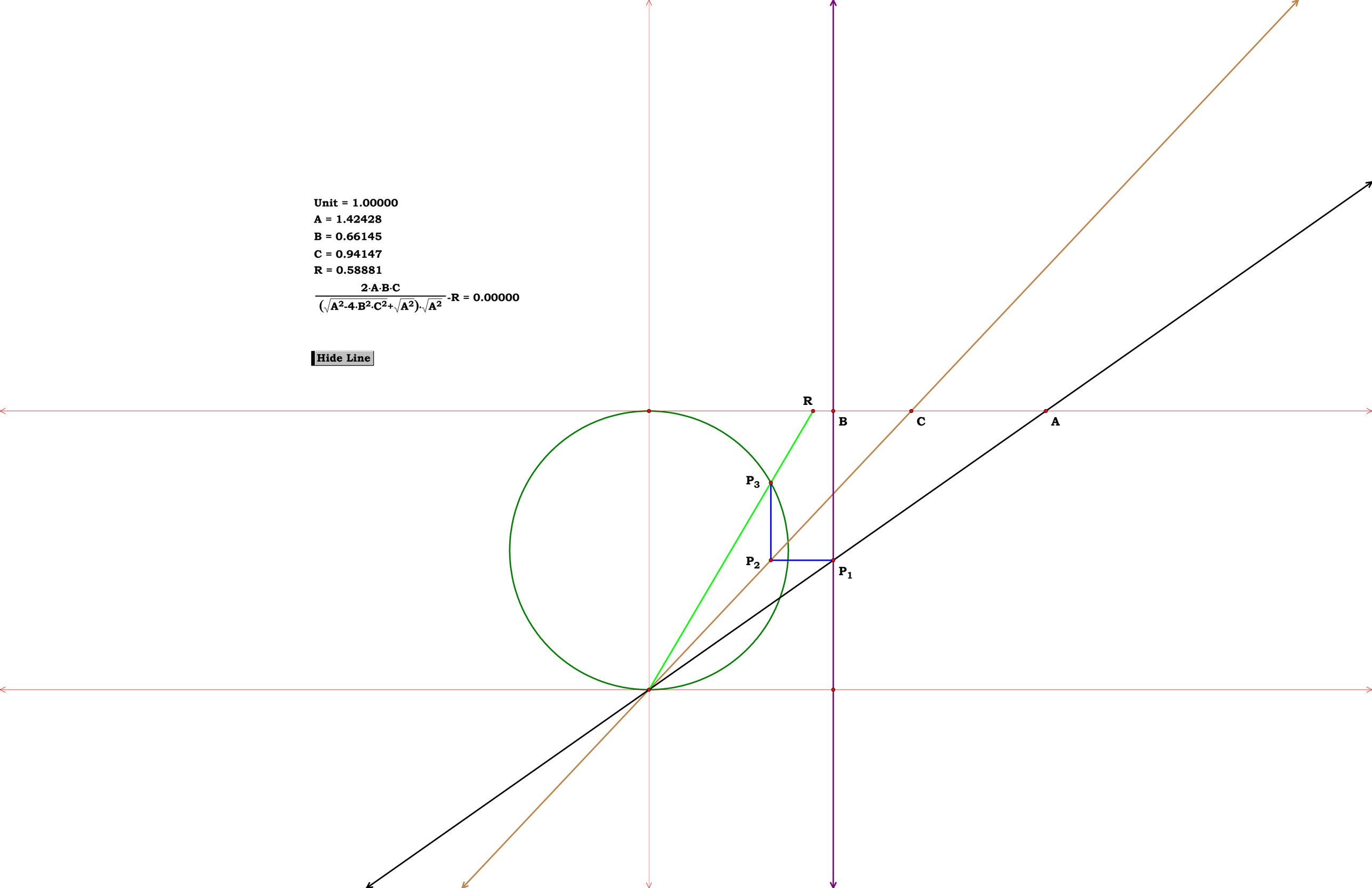


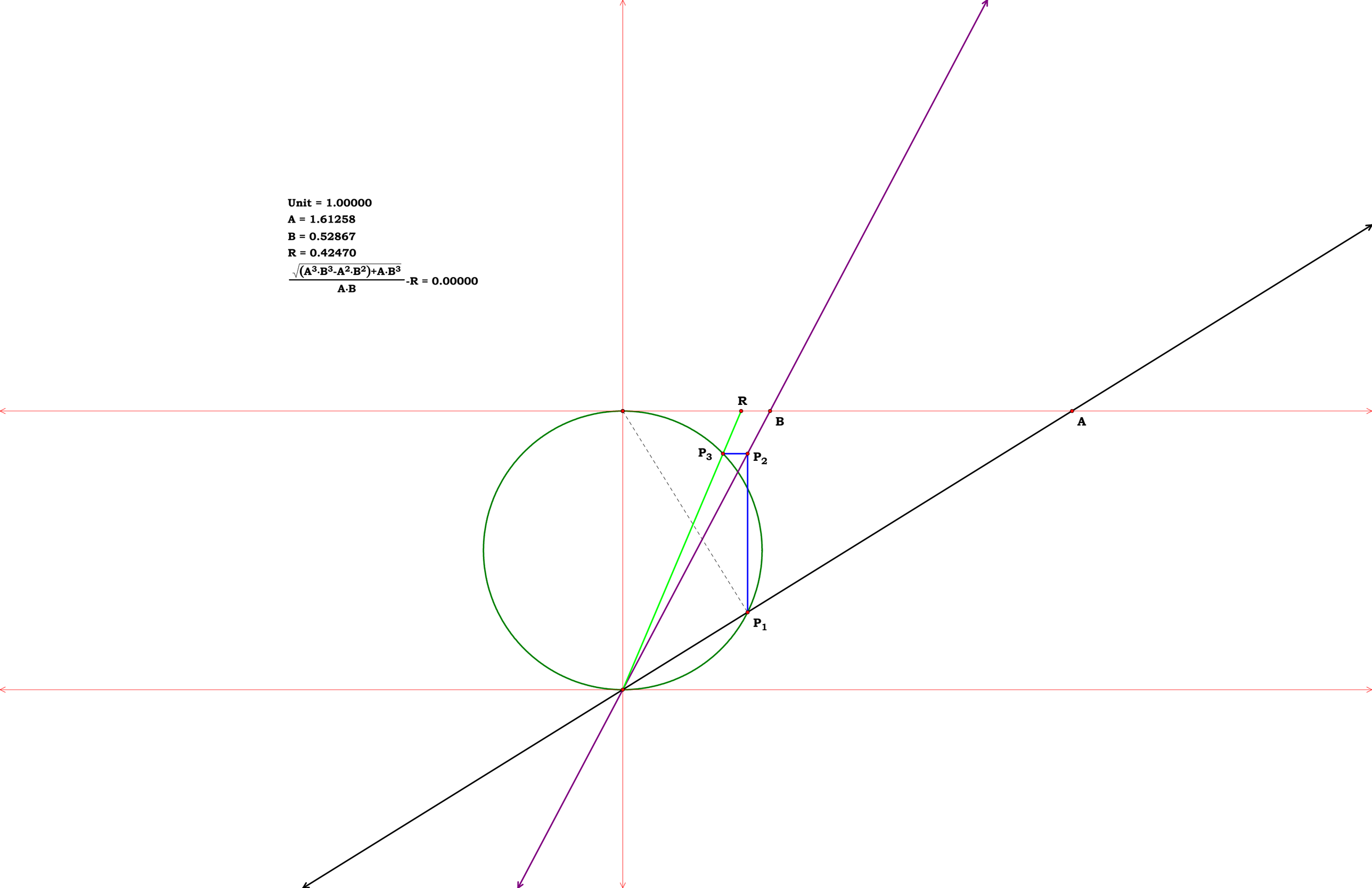
Unit = 1.00000

A = 1.61258

B = 0.52867

R = 0.42470

$$\frac{\sqrt{(A^3 \cdot B^3 - A^2 \cdot B^2) + A \cdot B^3}}{A \cdot B} - R = 0.00000$$



Unit = 1.00000

A = 1.36634

B = 0.72904

C = 0.56006

D = 1.17805

R = 1.06128

$$\frac{D\cdot\left(\sqrt{A^2-4\cdot B^2\cdot C^2}+\sqrt{A^2}\right)}{2\cdot\sqrt{A^2}}-R = 0.00000$$

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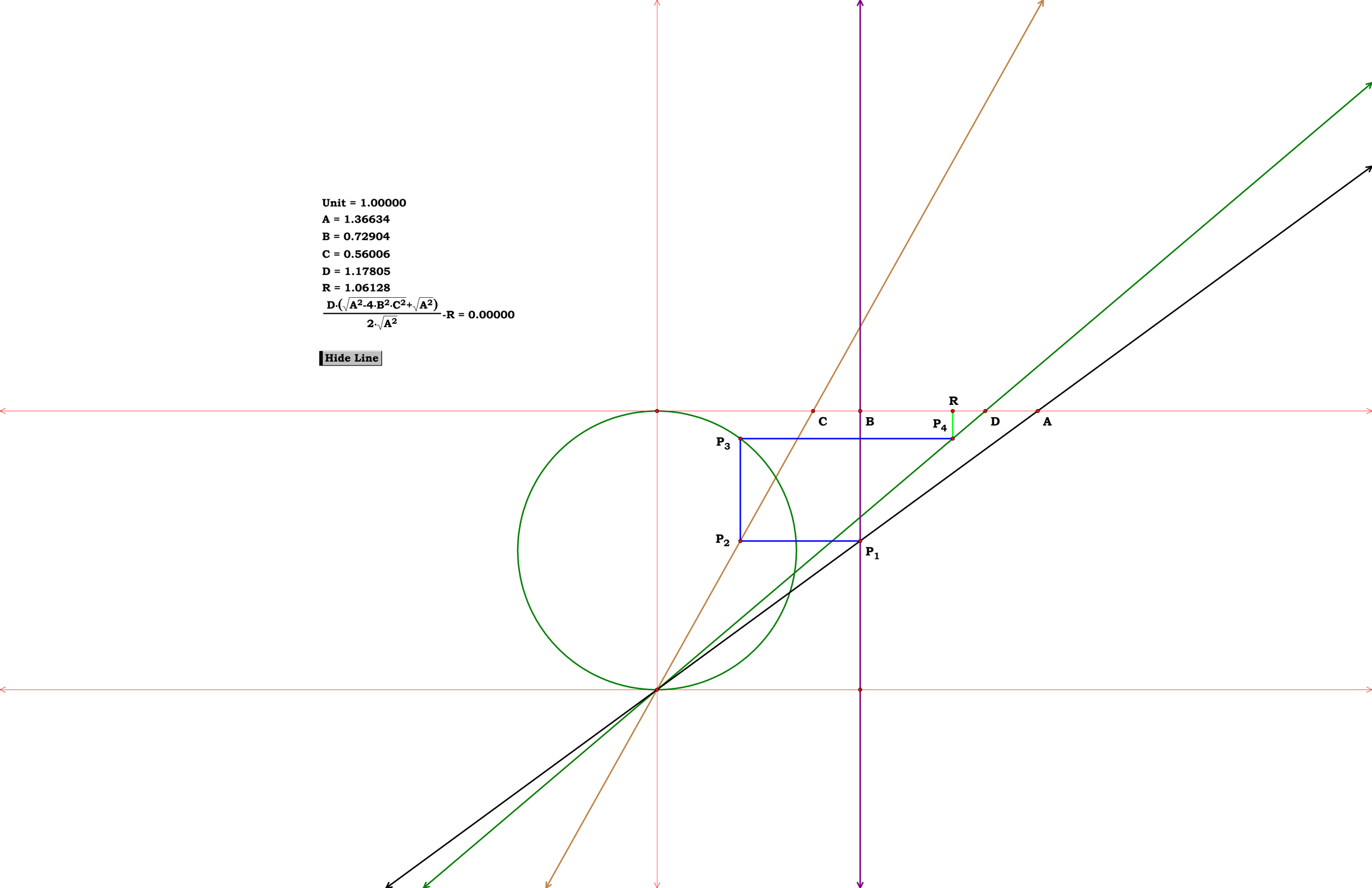

Unit = 1.00000

A = 1.30841

B = 0.61317

C = 0.77973

D = 0.92458

R = 1.09900

$$\frac{2 \cdot D \cdot \sqrt{A^2}}{\sqrt{A^2 - 4 \cdot B^2 \cdot C^2 + \sqrt{A^2}}} - R = 0.00000$$

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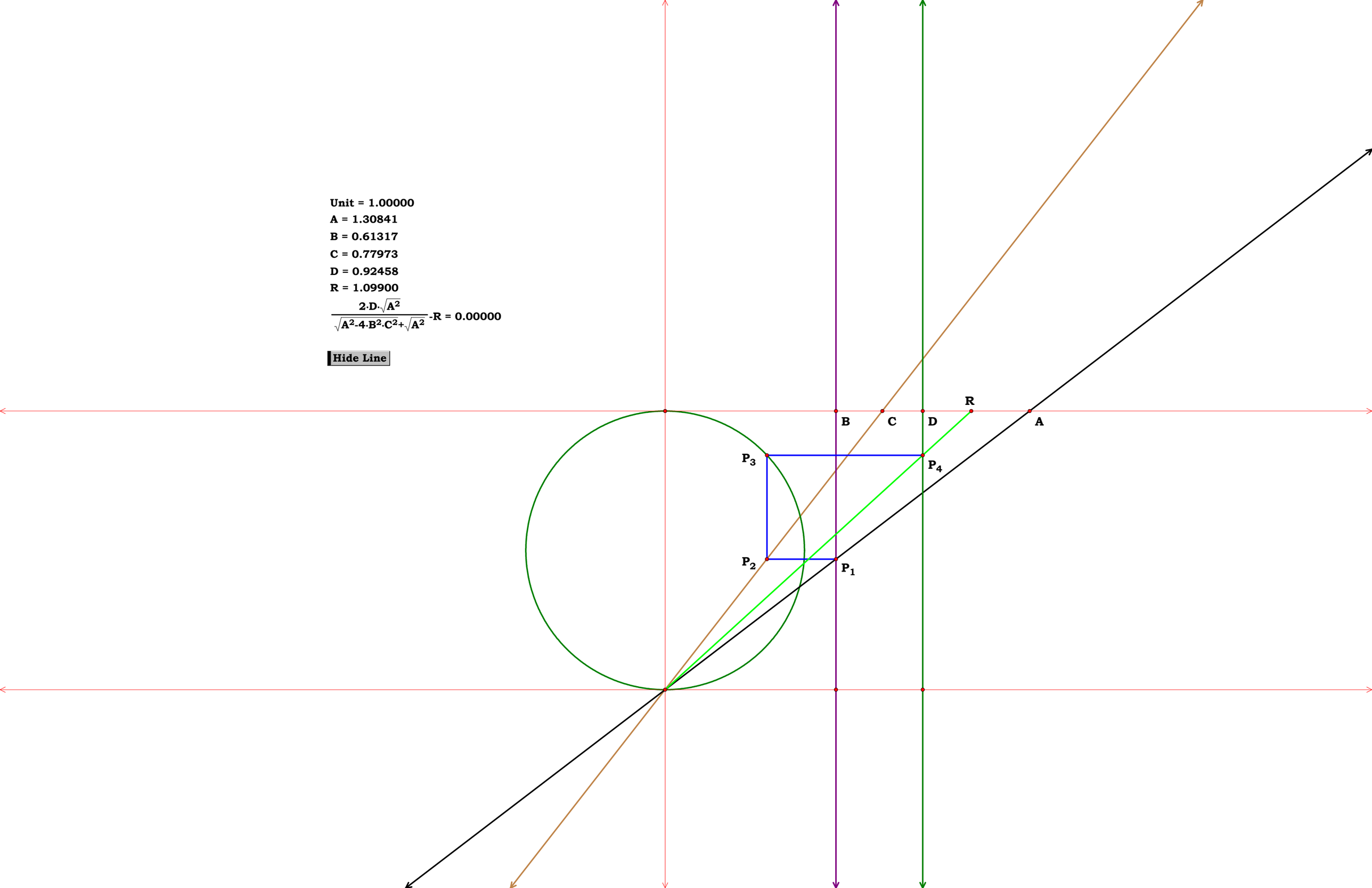

Unit = 1.00000

A = 1.42911

B = 0.64213

C = 0.77732

R = 1.06260

$\frac{A^2 \cdot B \cdot C + B \cdot C}{A} - R = 0.00000$

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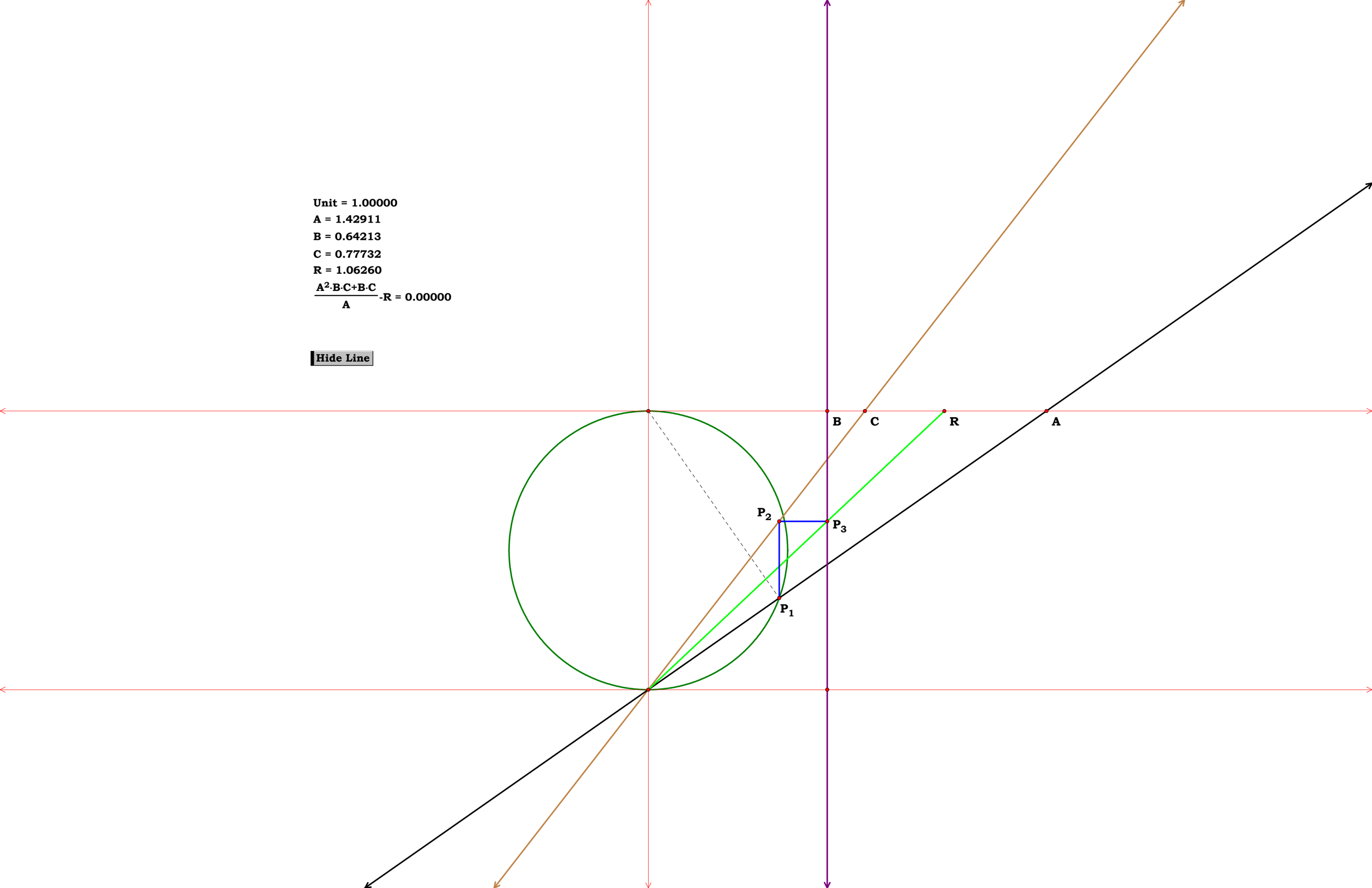

Unit = 1.00000
A = 2.07366
B = 0.80387
C = 0.63248
D = 1.23357
E = 0.93182
F = 1.12494
x_I = 1.49648

$$\frac{B\cdot F\cdot(A^2+1)\cdot\left(\sqrt{D^2-4\cdot C^2\cdot E^2}+\sqrt{D^2}\right)}{2\cdot A\cdot\sqrt{D^2}}-x_I = 0.00000$$

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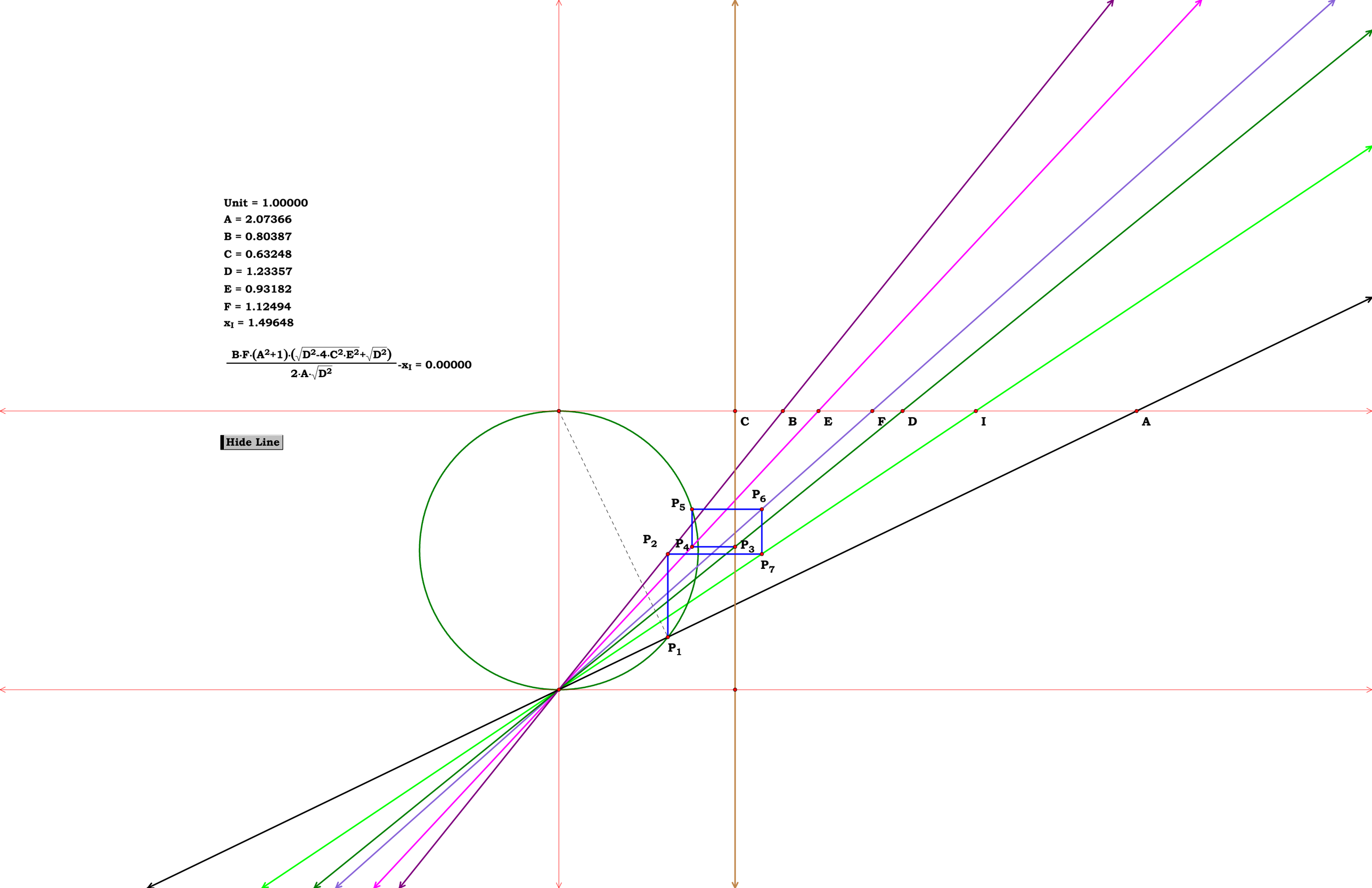


Unit = 1.00000

A = 0.95837

B = 0.70731

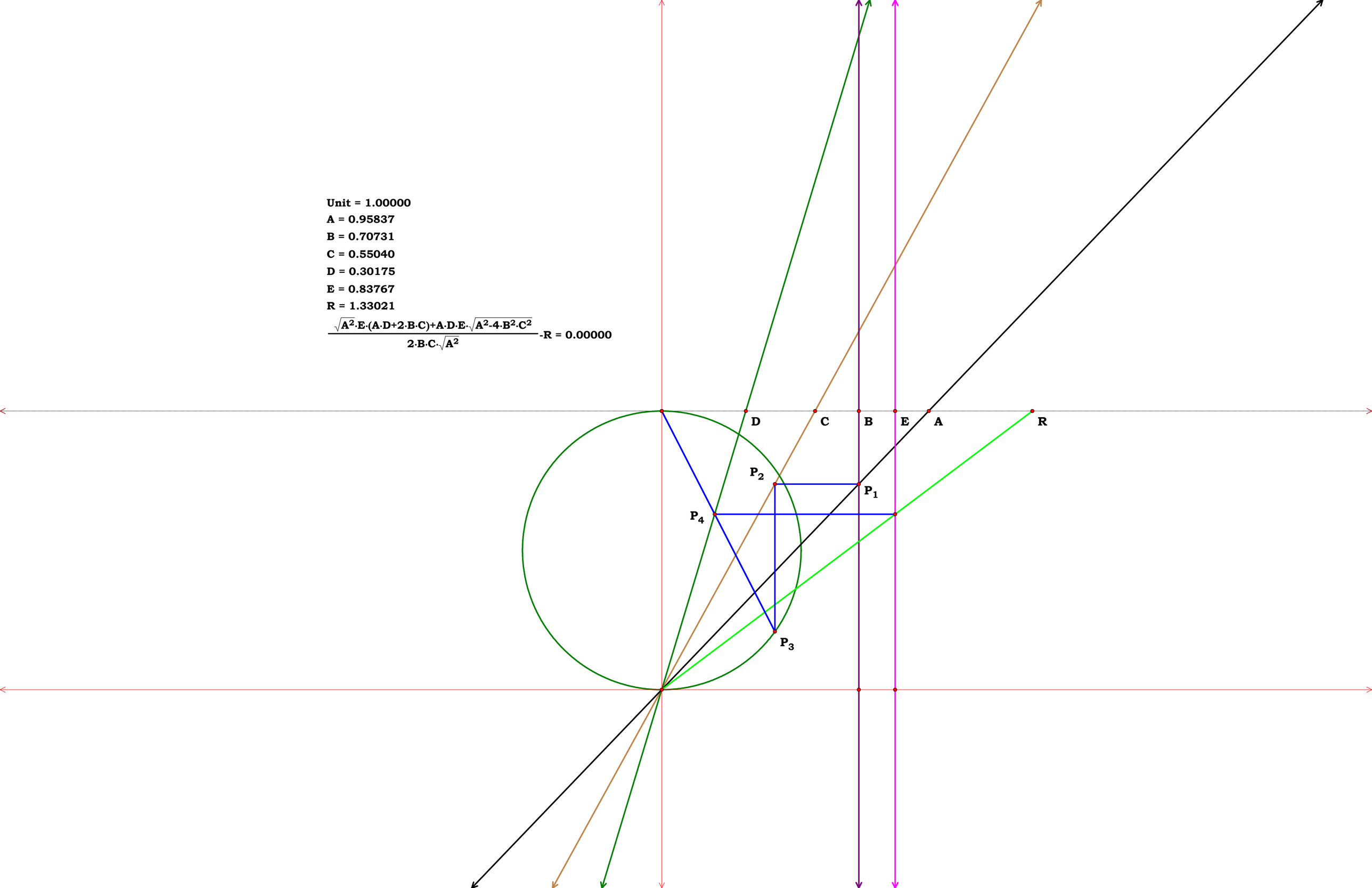
C = 0.55040

D = 0.30175

E = 0.83767

R = 1.33021

$$\frac{\sqrt{A^2}\cdot E\cdot(A\cdot D+2\cdot B\cdot C)+A\cdot D\cdot E\cdot\sqrt{A^2-4\cdot B^2\cdot C^2}}{2\cdot B\cdot C\cdot\sqrt{A^2}}-R = 0.00000$$



Unit = 1.00000

A = 1.55222

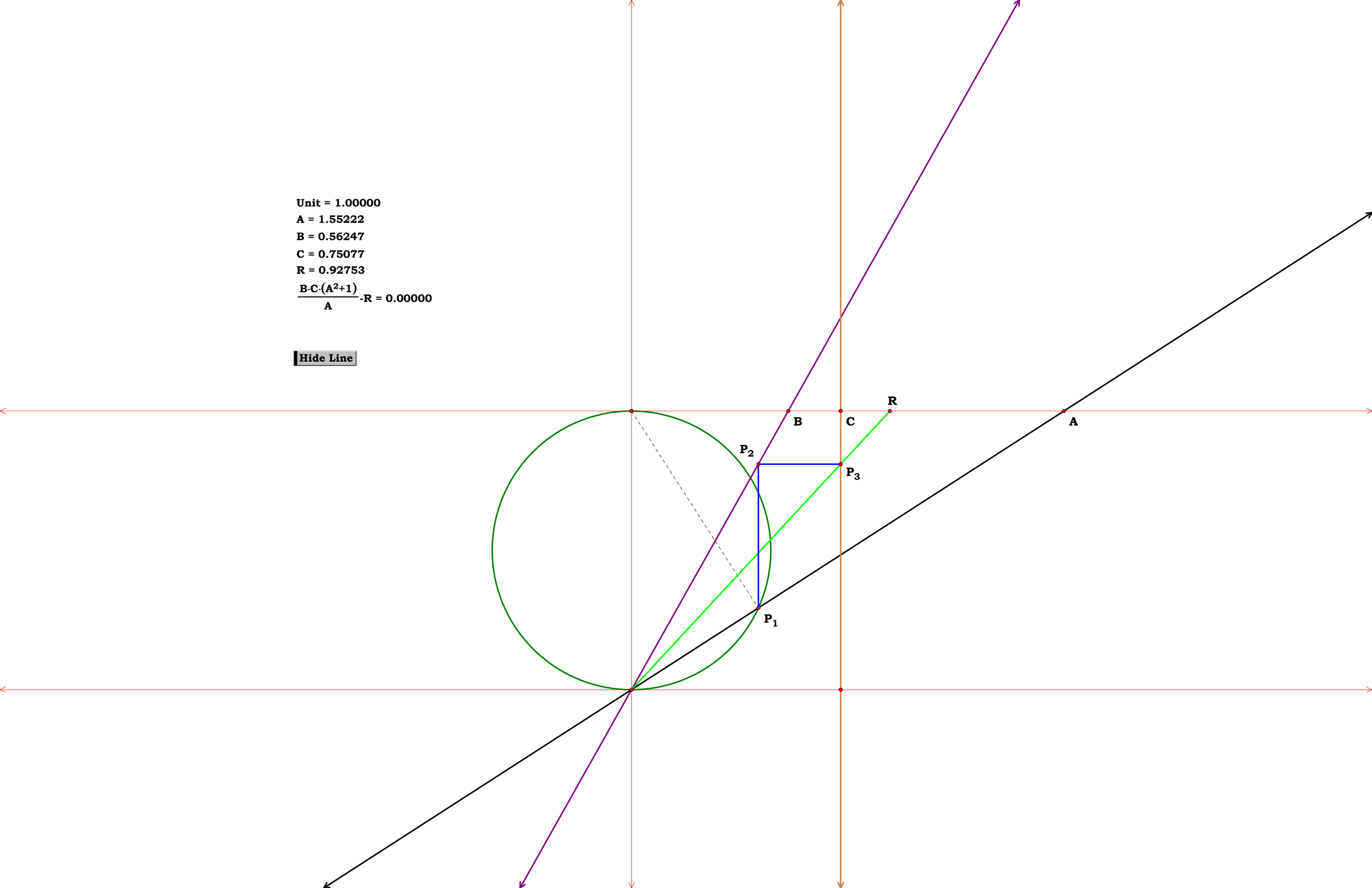
B = 0.56247

C = 0.75077

R = 0.92753

$\frac{B \cdot C \cdot (A^2+1)}{A}$ -R = 0.00000

Hide Line



Unit = 1.00000

A = 1.44842

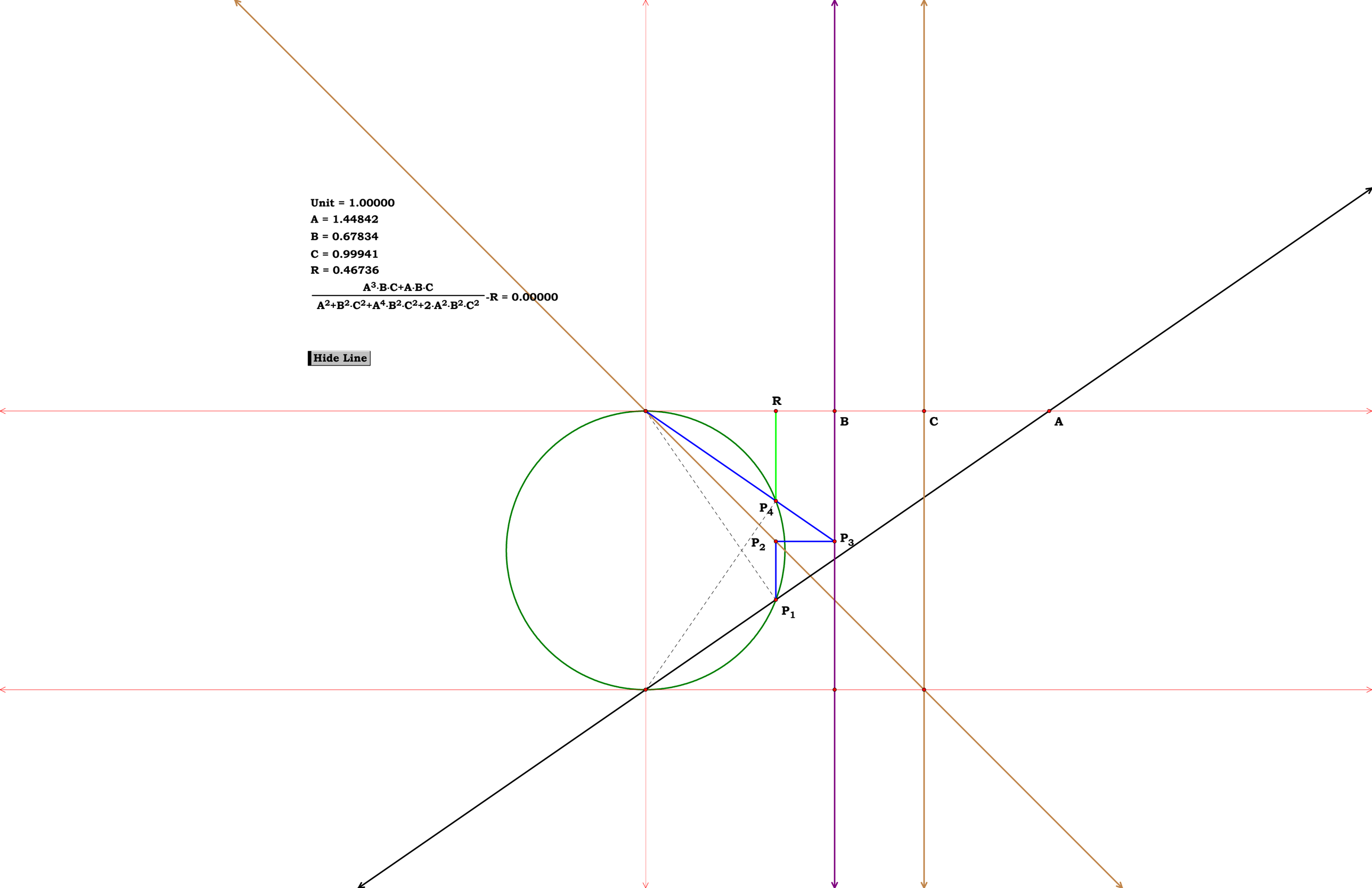
B = 0.67834

C = 0.99941

R = 0.46736

$$\frac{A^3 \cdot B \cdot C + A \cdot B \cdot C}{A^2 + B^2 \cdot C^2 + A^4 \cdot B^2 \cdot C^2 + 2 \cdot A^2 \cdot B^2 \cdot C^2} - R = 0.00000$$

Hide Line



Unit = 1.00000

A = 1.61982

B = 0.81353

C = 1.02597

R = 0.53554

$$\frac{A}{A^2 \cdot B \cdot C + B \cdot C} - R = 0.00000$$

Hide Line

R

B

C

A

Unit = 1.00000

A = 1.73328

B = 1.57395

C = 0.91009

D = 1.05735

R = 1.24795

$$\frac{A^2 \cdot B \cdot C + A \cdot D + B \cdot C}{B \cdot C \cdot D \cdot (A^2+1)} - R = 0.00000$$

P_5 R C D B A P_4 P_3 P_2 P_6 P_1

Unit = 1.00000

A = 0.48039

B = 0.95596

C = 0.66145

D = 1.67293

R = 0.82302

$$\frac{B\cdot C\cdot D\cdot(A^2+1)}{B\cdot C\cdot(A^2+1)+A\cdot D}-R = 0.00000$$

A

C

R

B

D

P_1

P_2

P_3

P_4

Unit = 1.00000
A = 1.75983
B = 0.65179
C = 1.25288
R = 0.99183
$\frac{A^2 \cdot B \cdot C + B \cdot C}{(A^2 \cdot C + C) - A} - R = 0.00000$

B
R
C
A
P_2
P_3
P_1

Unit = 1.00000

A = 1.19495

B = 0.65903

C = 1.05493

x_I = 1.41258

$\frac{A^2 \cdot B \cdot C + B \cdot C}{A} - x_I$ = 0.00000

Hide Line

B

C

A

I

P_2

P_3

P_1

Unit = 1.00000

A = 1.56188

B = 0.84974

C = 0.98010

R = 0.37328

$$\frac{2\cdot B\cdot C\cdot\sqrt{(A+C)^2}}{(A+C)\cdot\left(\sqrt{A+C^2}+\sqrt{((A+C)-2\cdot B\cdot C)\cdot(A+C+2\cdot B\cdot C)}\right)}-R = 0.00000$$

R

B

C

A

P_1

P_1

P_1

Unit = 1.00000

A = 1.61258

B = 0.94389

C = 0.56730

D = 0.71455

E = 1.29634

R = 1.00652

$$\frac{\left(D\cdot E\cdot\sqrt{\left(\sqrt{B\cdot C\cdot(D\cdot(A+B)-B\cdot C)}\cdot D\cdot E\cdot(A+B)-B\cdot C\cdot\sqrt{D^2\cdot(A+B)^2}\right)\cdot(D\cdot(A+B)-B\cdot C)}\cdot(A+B)\cdot(D\cdot(A+B)-B\cdot C)\right)}{\left(\sqrt{E^2\cdot\sqrt{(D\cdot(A+B)-B\cdot C)^2}\cdot\sqrt{B\cdot C\cdot(D\cdot(A+B)-B\cdot C)}}\cdot\sqrt{D^2\cdot\sqrt{D^2\cdot(A+B)^2\cdot(A+B)^2}}\right)} - R = 0.00000$$

P_5 R

C D B E A

P_3 P_4

P_6

P_7

P_2

P_1

$$D\cdot E\cdot\sqrt{\left(\sqrt{B\cdot C\cdot(D\cdot(A+B)-B\cdot C)}\cdot D\cdot E\cdot(A+B)-B\cdot C\cdot\sqrt{D^2\cdot(A+B)^2}\right)\cdot(D\cdot(A+B)-B\cdot C)}\cdot(A+B)\cdot(D\cdot(A+B)-B\cdot C) = 3.45893$$

$$\sqrt{E^2\cdot\sqrt{(D\cdot(A+B)-B\cdot C)^2}\cdot\sqrt{B\cdot C\cdot(D\cdot(A+B)-B\cdot C)}}\cdot\sqrt{D^2\cdot\sqrt{D^2\cdot(A+B)^2\cdot(A+B)^2}} = 3.43653$$

Unit = 1.00000

A = 1.71638

B = 1.17805

C = 0.96079

D = 0.68800

R = 0.53485

$$\frac{D\cdot\sqrt{B^2}\cdot\left(\sqrt{A\cdot B}+B\cdot C\right)\cdot\sqrt{B\cdot\left(\left(C^2\cdot D\cdot\sqrt{A\cdot B}-A\cdot C^2\right)+A\cdot C\cdot D\right)}}{C\cdot\sqrt{(B\cdot D)^2}\cdot\sqrt{A\cdot B}\cdot\sqrt{\left(\sqrt{A\cdot B}+B\cdot C\right)^2}}-R = 0.00000$$

Hide Line

R

D

C

B

A

P_5

P_4

P_3

P_3

P_1

Unit = 1.00000

A = 1.56188

B = 1.41704

C = 1.20943

D = 1.86605

R = 0.66763

$$\frac{D\cdot(A+B)\cdot\sqrt{B\cdot C\cdot((A\cdot D-B\cdot C)+B\cdot D)}}{\sqrt{(D\cdot(A+B))^2\cdot((A\cdot D-B\cdot C)+B\cdot D)}}-R = 0.00000$$

R

C

B

A

D

P_4

P_3

P_2

P_1

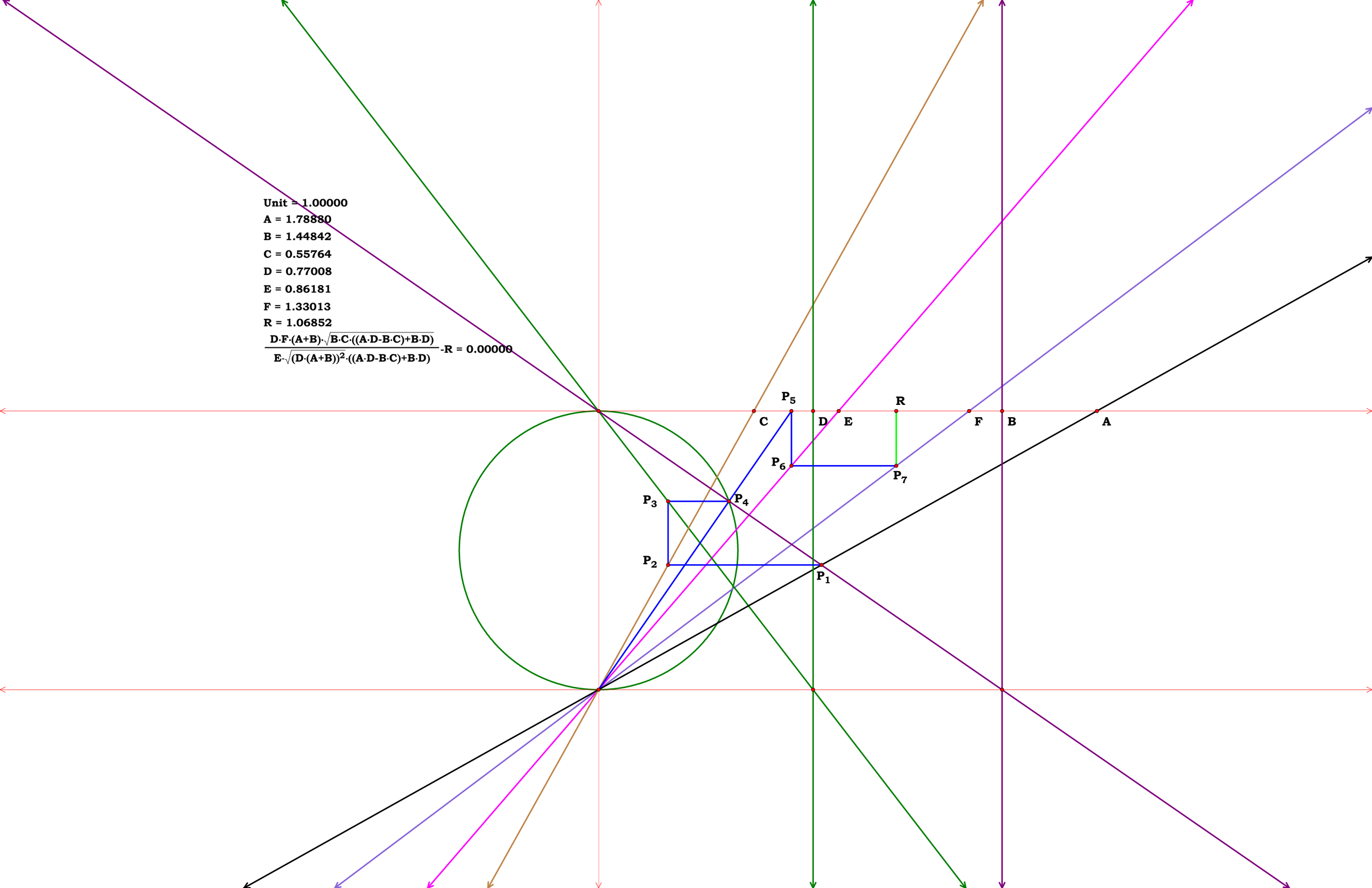
Unit = 1.00000
A = 1.67775
B = 1.12977
C = 0.60592
D = 0.89802
E = 1.05252
R = 0.48287

$$\frac{D\cdot E\cdot(A+B)\cdot((A\cdot D-B\cdot C)+B\cdot D)}{D^2\cdot(A+B)^2+(B\cdot C\cdot E)^2+D\cdot E^2\cdot(A+B)\cdot((A\cdot D-2\cdot B\cdot C)+B\cdot D)}-R = 0.00000$$

R
P_5
C
D
E
B
A
P_3
P_4
P_6
P_2
P_1

Unit = 1.00000
A = 1.78880
B = 1.44842
C = 0.55764
D = 0.77008
E = 0.86181
F = 1.33013
R = 1.06852

$$\frac{D\cdot F\cdot(A+B)\cdot\sqrt{B\cdot C\cdot((A\cdot D-B\cdot C)+B\cdot D)}}{E\cdot\sqrt{(D\cdot(A+B))^2}\cdot((A\cdot D-B\cdot C)+B\cdot D)}-R = 0.00000$$



Unit = 1.00000

A = 1.67534

B = 1.26013

C = 1.03562

D = 0.82077

R = 0.59820

$$\frac{D\cdot\left(\sqrt{(A+B)^2}+\sqrt{(A+B+2\cdot B\cdot C)\cdot((A+B)-2\cdot B\cdot C)}\right)}{2\cdot\sqrt{(A+B)^2}}-R = 0.00000$$

R

D

C

B

A

P_3

P_4

P_2

P_1

Unit = 1.00000

A = 1.60292

B = 1.19978

C = 0.94147

D = 0.59385

R = 0.74612

$$\frac{2\cdot D\cdot\sqrt{(A+B)^2}}{\sqrt{(A+B)^2}+\sqrt{(A+B+2\cdot B\cdot C)\cdot((A+B)-2\cdot B\cdot C)}}-R = 0.00000$$

R

D

C

B

A

P_4

P_3

P_2

P_1

Unit = 1.00000

A = 1.92640

B = 1.18771

C = 0.44418

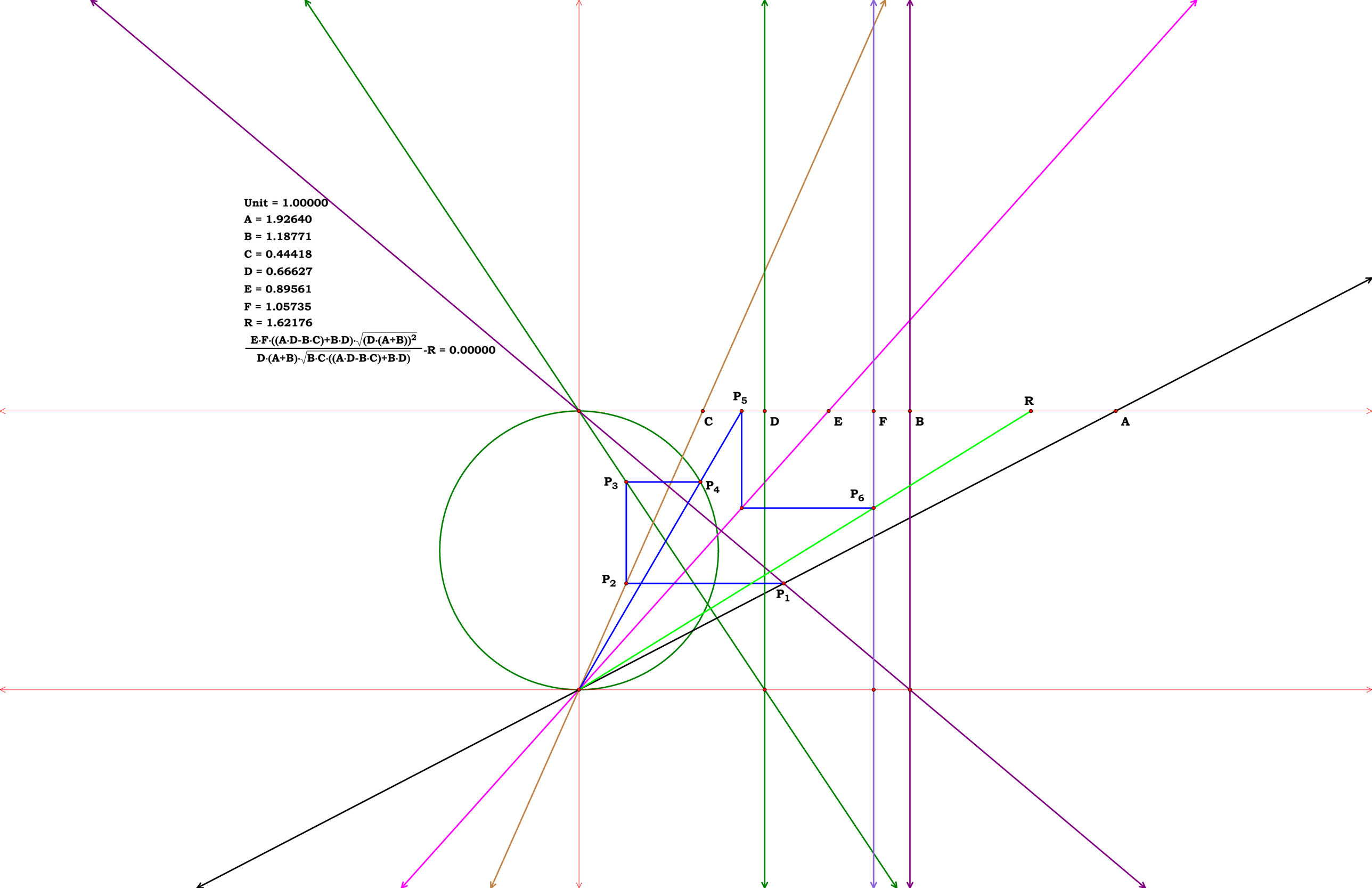
D = 0.66627

E = 0.89561

F = 1.05735

R = 1.62176

$$\frac{E\cdot F\cdot((A\cdot D-B\cdot C)+B\cdot D)\cdot\sqrt{(D\cdot(A+B))^2}}{D\cdot(A+B)\cdot\sqrt{B\cdot C\cdot((A\cdot D-B\cdot C)+B\cdot D)}}-R = 0.00000$$



Unit = 1.00000

A = 1.67534

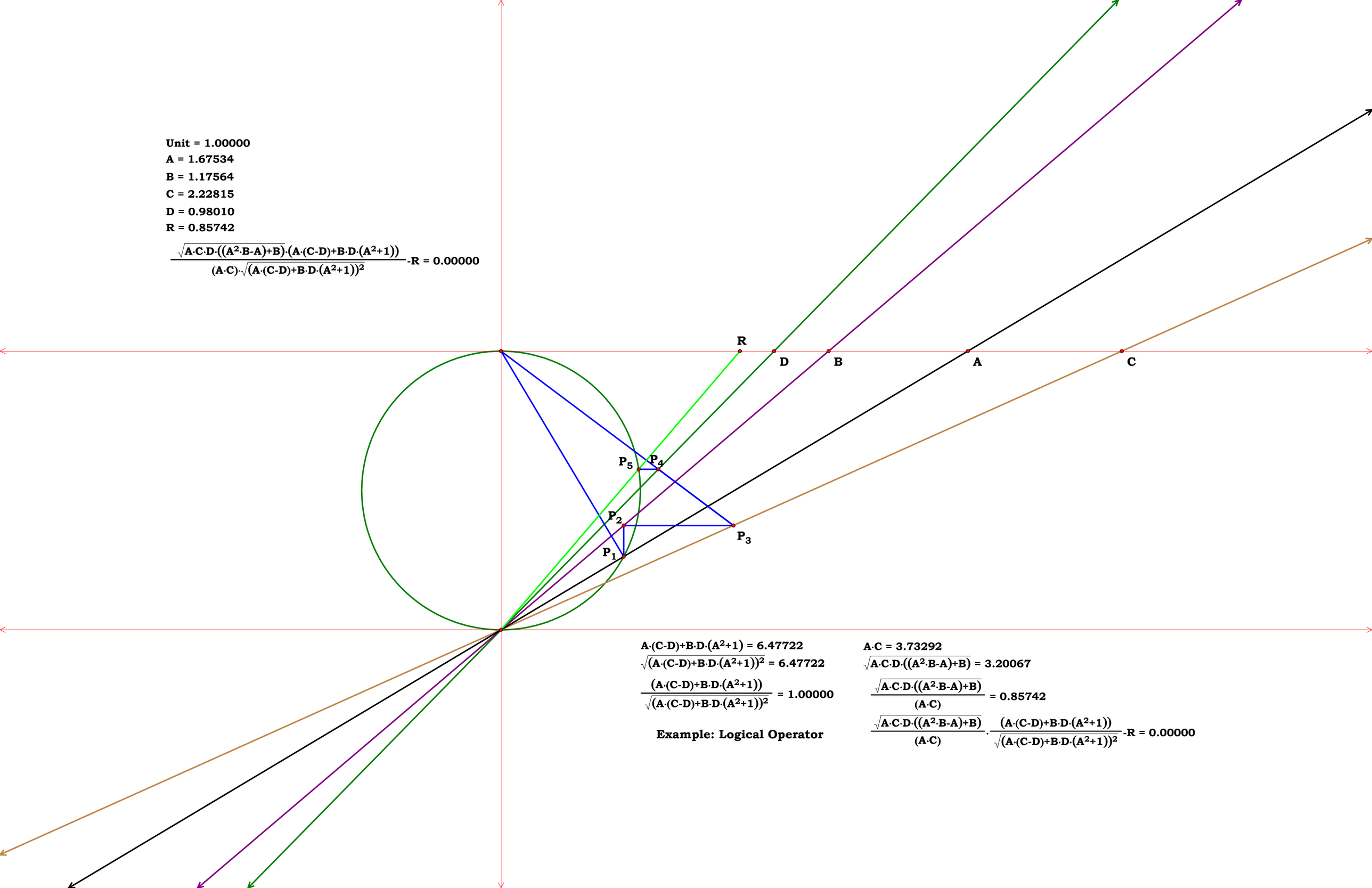
B = 1.17564

C = 2.22815

D = 0.98010

R = 0.85742

$$\frac{\sqrt{A\cdot C\cdot D\cdot\left(\left(A^2\cdot B-A\right)+B\right)}\cdot\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)}{(A\cdot C)\cdot\sqrt{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)^2}}-R = 0.00000$$



$A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right) = 6.47722$

$\sqrt{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)^2} = 6.47722$

$$\frac{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)}{\sqrt{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)^2}} = 1.00000$$

Example: Logical Operator

$A\cdot C = 3.73292$

$\sqrt{A\cdot C\cdot D\cdot\left(\left(A^2\cdot B-A\right)+B\right)} = 3.20067$

$$\frac{\sqrt{A\cdot C\cdot D\cdot\left(\left(A^2\cdot B-A\right)+B\right)}}{(A\cdot C)} = 0.85742$$

$$\frac{\sqrt{A\cdot C\cdot D\cdot\left(\left(A^2\cdot B-A\right)+B\right)}}{(A\cdot C)}\cdot\frac{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)}{\sqrt{\left(A\cdot(C-D)+B\cdot D\cdot\left(A^2+1\right)\right)^2}}-R = 0.00000$$

Unit = 1.00000
A = 1.47015
B = 1.16357
C = 1.75742
D = 0.72904
E = 1.96744
R = 0.58204

$$\frac{A \cdot C \cdot D \cdot E}{D \cdot E \cdot ((A^2 \cdot B - A) + B) - A \cdot C \cdot (D - E)} - R = 0.00000$$

R
D
B
A
C
E
P_4
P_4
P_2
P_3
P_1

Unit = 1.00000

A = 1.42428

B = 0.83526

C = 0.58661

R = 0.45526

$\frac{(A^2 \cdot B \cdot C + B \cdot C) - A \cdot C}{A} - R = 0.00000$

R

C

B

A

P_3

P_3

P_1

Unit = 1.00000

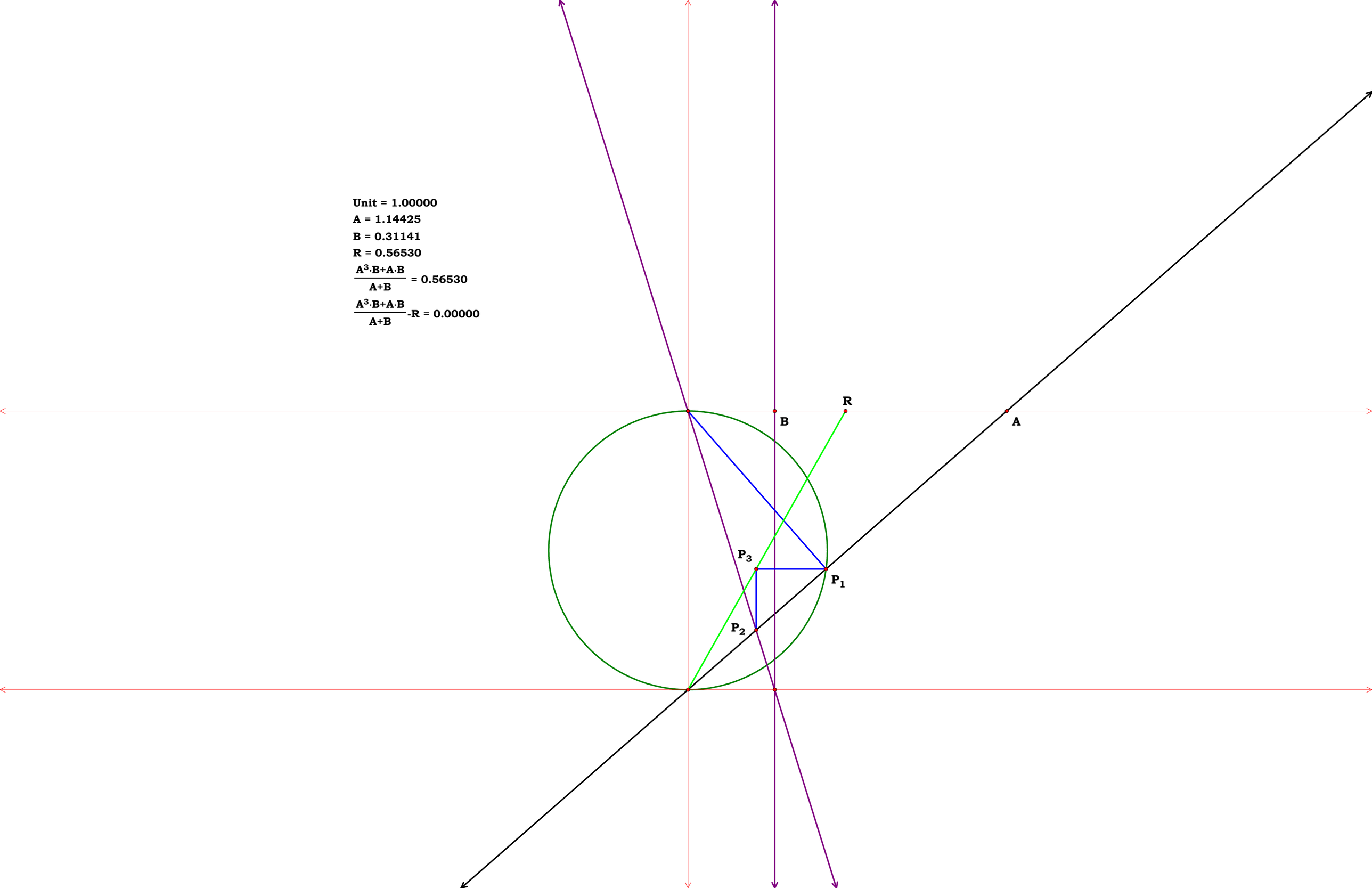
A = 1.14425

B = 0.31141

R = 0.56530

$\frac{A^3 \cdot B + A \cdot B}{A+B}$ = 0.56530

$\frac{A^3 \cdot B + A \cdot B}{A+B}$ -R = 0.00000



Unit = 1.00000

A = 1.38083

B = 0.95837

C = 0.49488

R = 0.72543

$\frac{(A^2 \cdot B \cdot C + B \cdot C) - A \cdot C}{B} - R = 0.00000$

C

R

B

A

P_3

P_2

P_4

P_1

Unit = 1.00000

A = 1.45808

B = 0.89078

C = 1.07907

R = 1.20126

$\frac{A^3 \cdot C}{A^2 \cdot B + B} - R = 0.00000$

B

C

R

A

P_3

P_4

P_2

P_1

Unit = 1.00000

A = 1.42911

B = 0.82801

C = 0.95113

D = 0.37659

R = 0.48837

$\frac{B \cdot D \cdot (A^2+1)}{A^2 \cdot C}$ -R = 0.00000

R

D

B

C

A

P_4

P_3

P_2

P_1

Unit = 1.00000

A = 1.21185

B = 0.73628

C = 1.40014

D = 1.06700

R = 0.94927

$$\frac{B^2 \cdot C}{(A^2 \cdot D^2 - 2 \cdot A \cdot B \cdot D^2) + B^2 \cdot D^2 + B^2} - R = 0.00000$$

R

B

D

A

C

P_3

P_1

P_2

P_4

Unit = 1.00000

A = 1.94088

B = 0.94872

C = 1.19736

D = 1.38324

E = 1.56671

R = 0.82086

$$\frac{B^2 \cdot D \cdot E}{C^2 \cdot E \cdot (A-B)^2 - B^2 \cdot (D-E)} - R = 0.00000$$

R

B

C

D

E

A

P_5

P_2

P_1

P_3

P_4

Unit = 1.00000

A = 1.60051

B = 1.05011

C = 1.87088

D = 0.42246

E = 0.86181

R = 0.57720

$$\frac{E\cdot\sqrt{B^2\cdot D}\cdot\sqrt{C^2\cdot E\cdot(A-B)^2-B^2\cdot(D-E)}}{\sqrt{E^2}\cdot\left(C^2\cdot E\cdot(A-B)^2-B^2\cdot(D-E)\right)}-R = 0.00000$$

R

D

E

B

A

C

P_5

P_6

P_2

P_1

P_4

P_3

Unit = 1.00000

A = 1.69224

B = 0.55764

C = 1.24806

D = 1.14184

R = 0.82236

$$\frac{A^2 \cdot B \cdot C + B \cdot C}{A^2 \cdot D} - R = 0.00000$$

R

B

D

C

A

P_4

P_3

P_1

P_2

Unit = 1.00000

A = 1.59326

B = 0.93665

C = 1.80328

D = 0.70490

E = 1.19495

F = 1.07907

R = 1.39605

$$\frac{E\cdot F\cdot\left(A\cdot C^2\cdot(A-2\cdot B)+B^2\cdot\left(C^2+1\right)\right)}{E\cdot\left(A\cdot C^2\cdot(A-2\cdot B)+B^2\cdot\left(C^2+1\right)\right)-B^2\cdot D}-R = 0.00000$$

D B F E R A C

P_1 P_2 P_3 P_4 P_5 P_6

Unit = 1.00000

A = 2.16056

B = 1.42187

C = 1.07183

D = 0.97286

E = 0.60351

R = 0.74842

$$\frac{B\cdot D\cdot E\cdot(A^2+1)}{C\cdot((A^2\cdot B-A)+B)}-R = 0.00000$$

R

E

D

C

B

A

P_5

P_4

P_2

P_3

P_1

Unit = 1.00000

A = 1.80811

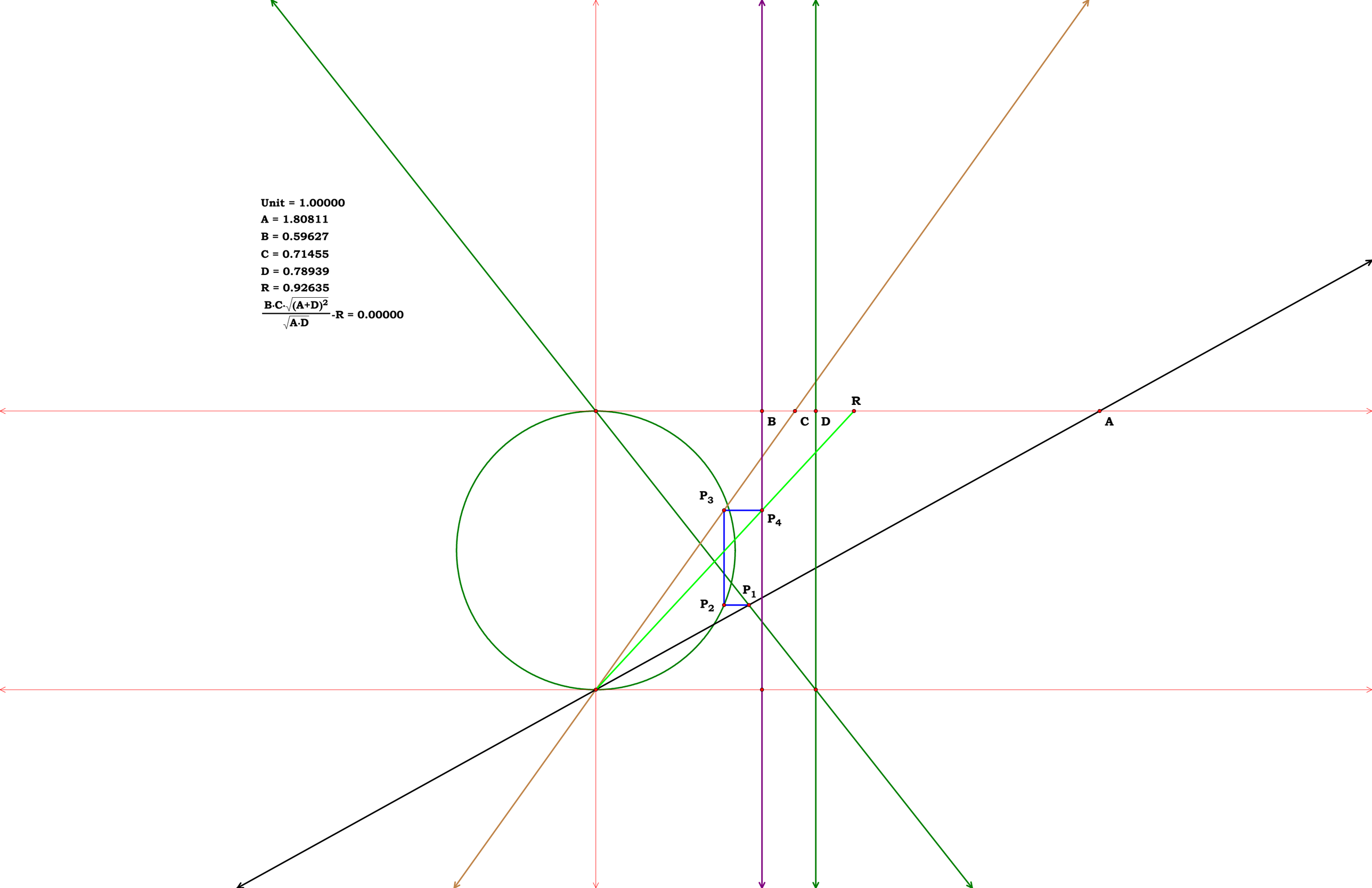
B = 0.59627

C = 0.71455

D = 0.78939

R = 0.92635

$\frac{B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{A \cdot D}} - R = 0.00000$



Unit = 1.00000

A = 0.96561

B = 1.52326

C = 0.55764

D = 0.70731

R = 0.45869

$$\frac{2\cdot B\cdot D\cdot\sqrt{(A\cdot(B+C)-B\cdot C)^2}\cdot(A-C)}{\left(\sqrt{(A\cdot(B+C)-B\cdot C)^2}+\sqrt{((2\cdot D+1)\cdot A\cdot B+C\cdot(A-B-2\cdot B\cdot D))\cdot((1-2\cdot D)\cdot A\cdot B+C\cdot((A-B)+2\cdot B\cdot D))}\right)\cdot(A\cdot(B+C)-B\cdot C)}-R = 0.00000$$

R

C

D

A

B

P_4

P_2

P_3

P_1

Unit = 1.00000

A = 1.35669

B = 1.08149

C = 0.67110

R = 0.49738

$$\frac{\sqrt{A^2 \cdot B \cdot C - A \cdot B \cdot C^2}}{\sqrt{((A \cdot B + A \cdot C) - B \cdot C)^2}} - R = 0.00000$$

R

C

B

A

P_2

P_3

P_1

N[1] -> 0
N[1] -> 1
N[1] -> 2
N[1] -> 3
N[1] -> 4
N[1] -> 5
N[1] -> 6
N[1] -> 7
N[1] -> 8
N[1] -> 9
N[1] -> 10
N[1] -> 11

N[2] -> 0
N[2] -> 1
N[2] -> 2
N[2] -> 3
N[2] -> 4
N[2] -> 5
N[2] -> 6
N[2] -> 7
N[2] -> 8
N[2] -> 9
N[2] -> 10
N[2] -> 11

N[3] -> 0
N[3] -> 1
N[3] -> 2
N[3] -> 3
N[3] -> 4
N[3] -> 5
N[3] -> 6
N[3] -> 7
N[3] -> 8
N[3] -> 9
N[3] -> 10
N[3] -> 11
Show Lines
Show Points

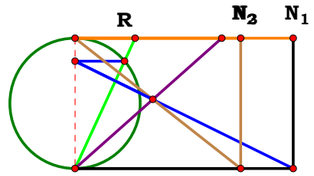
Show Intersections
Hide Objects

$N_1 = 1.67305$

$N_2 = 1.12592$

$N_3 = 1.27120$

$R = 0.46123$



$$\left(\frac{\sqrt{N_1^2 \cdot N_2 \cdot N_3 - N_1 \cdot N_2 \cdot N_3^2}}{N_1 \cdot N_3}\right) \cdot \left(\frac{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3}{\sqrt{((N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3)^2}}\right) - R = 0.00000$$

Unit = 1.00000
A = 1.52084
B = 1.76707
C = 1.14425
D = 1.07183
R = 0.62944

$$\frac{A \cdot B \cdot D}{(A \cdot B^2 \cdot D - A \cdot C) + C \cdot D} - R = 0.00000$$

R

D C A B

P_1

P_1

P_2

Unit = 1.00000

A = 1.21426

B = 1.05735

C = 1.69465

R = 0.74842

$$\frac{\left(A\cdot\sqrt{(B+C)^2}-\sqrt{B\cdot C}\right)\cdot(B+C)\cdot\sqrt{A\cdot B\cdot\left(A\cdot C\cdot\sqrt{(B+C)^2}-\sqrt{B\cdot C}\cdot(B+C)\right)}}{A\cdot B\cdot\sqrt{(B+C)^2}^{\frac{3}{2}}\cdot\sqrt{\left(\sqrt{B\cdot C}-A\cdot\sqrt{(B+C)^2}\right)^2}}-R = 0.00000$$

R

B

A

C

P_3

P_4

P_2

P_1

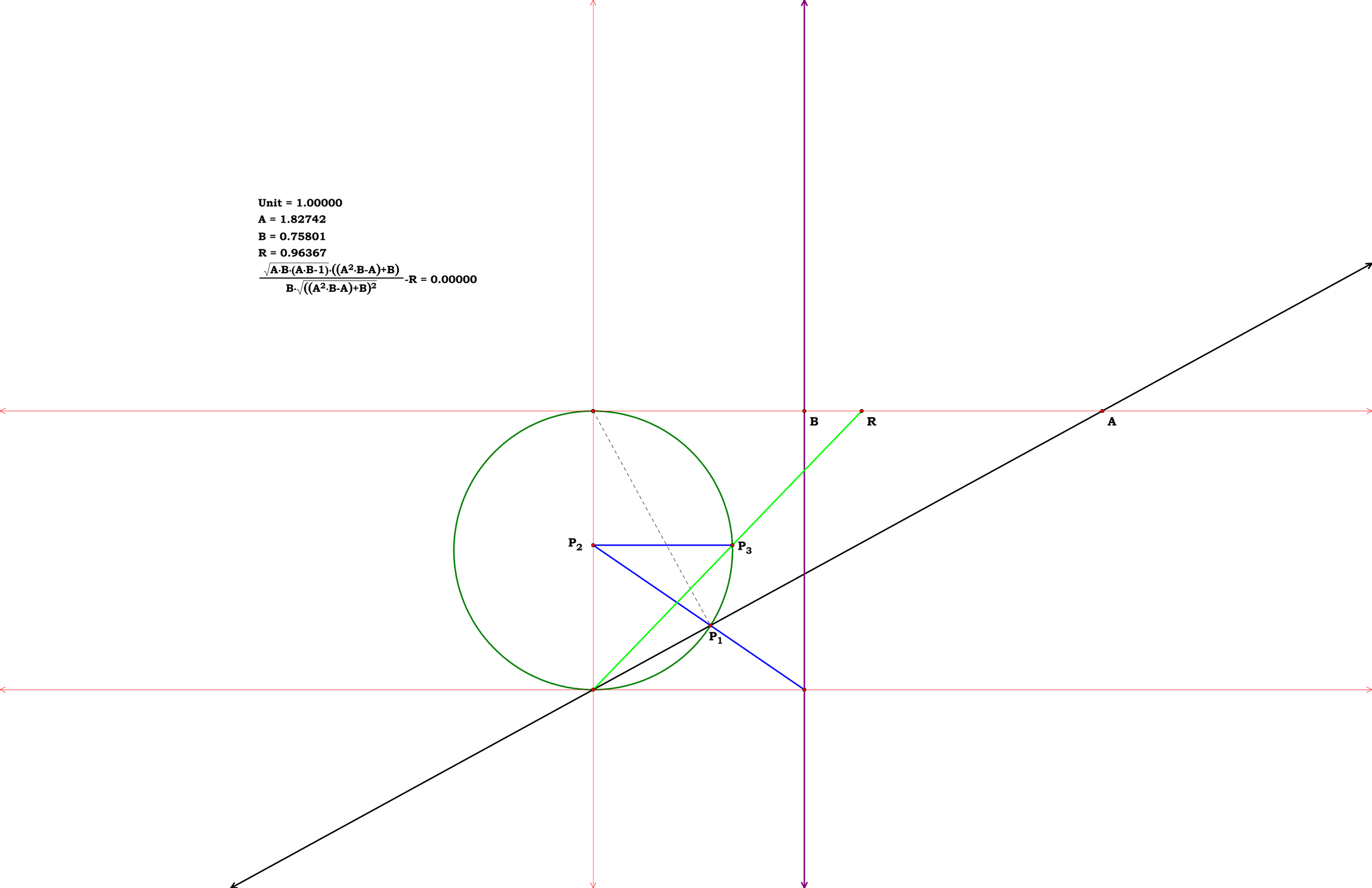
Unit = 1.00000

A = 1.82742

B = 0.75801

R = 0.96367

$$\frac{\sqrt{A\cdot B\cdot(A\cdot B-1)\cdot((A^2\cdot B-A)+B)}}{B\cdot\sqrt{((A^2\cdot B-A)+B)^2}}-R = 0.00000$$



Unit = 1.00000

A = 1.22874

B = 1.69224

C = 0.67110

R = 0.99757

$\frac{B \cdot C \cdot (A \cdot B - 1)}{A} - R = 0.00000$

C

R

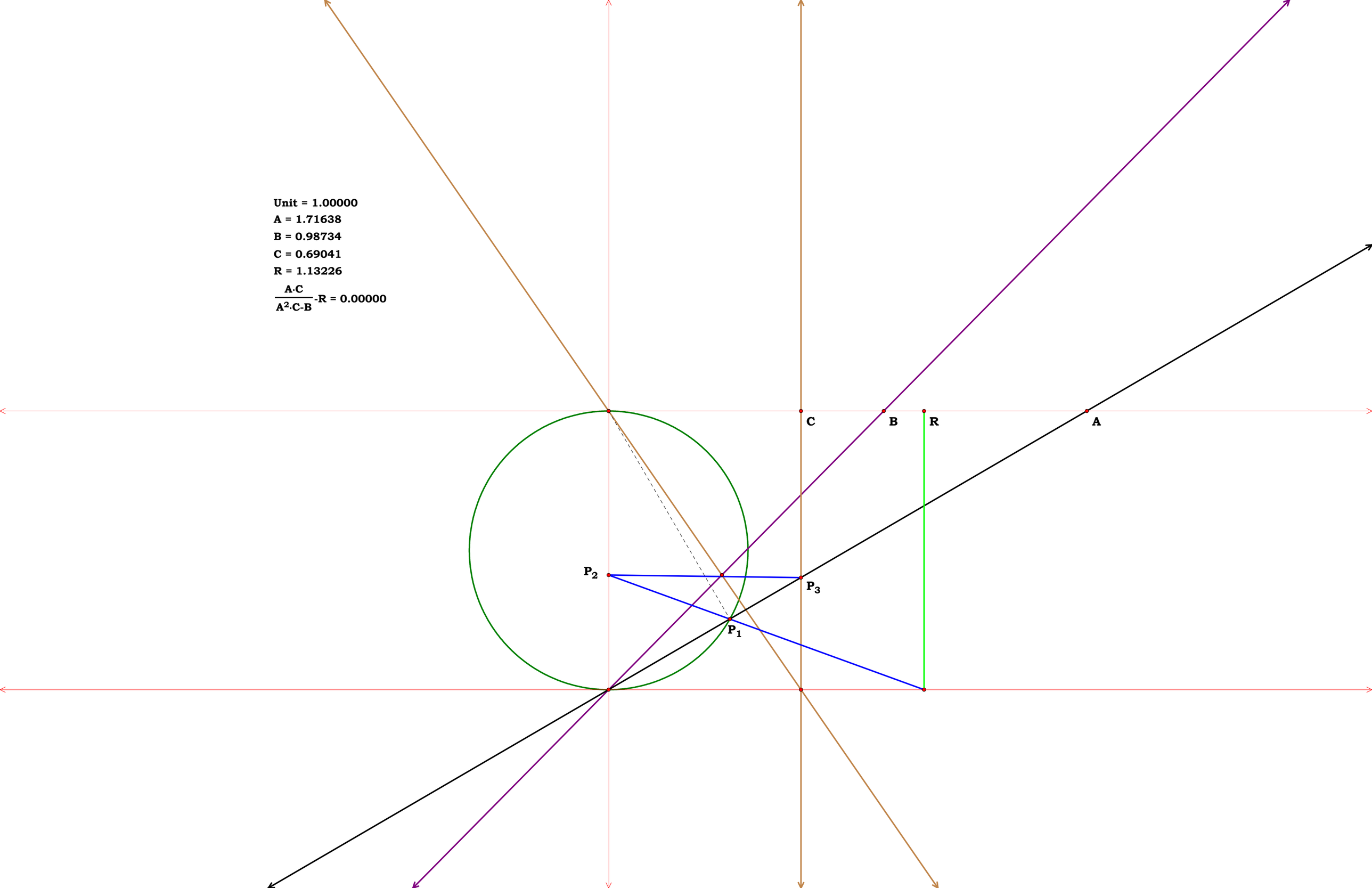
A

B

P_2

P_3

P_1


Unit = 1.00000
A = 1.71638
B = 0.98734
C = 0.69041
R = 1.13226
$\frac{A \cdot C}{A^2 \cdot C - B} - R = 0.00000$
C
B
R
A
P_2
P_3
P_1

Unit = 1.00000

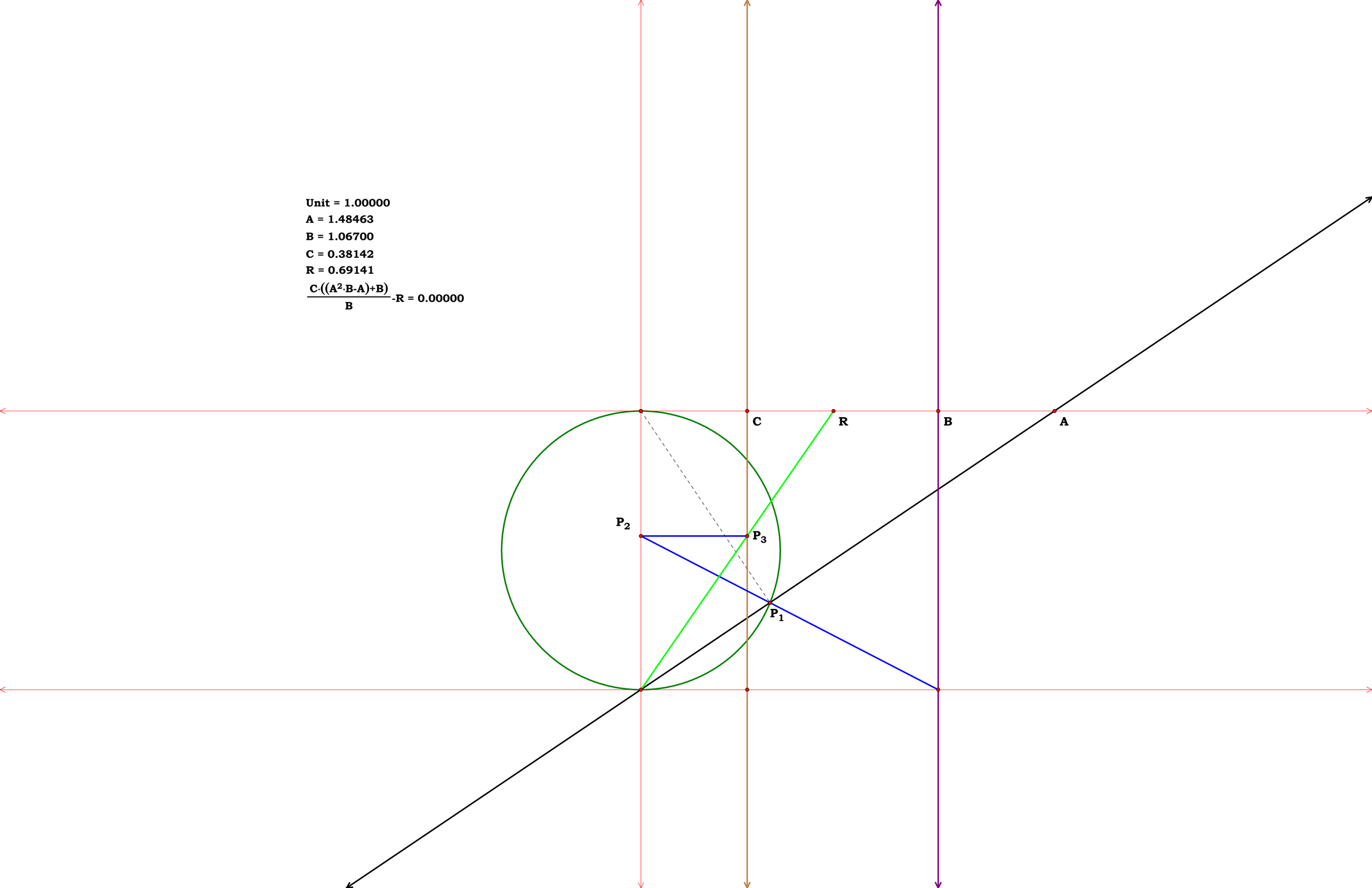
A = 1.48463

B = 1.06700

C = 0.38142

R = 0.69141

$\frac{C\cdot((A^2\cdot B-A)+B)}{B}$-R = 0.00000



Unit = 1.00000

A = 2.00124

B = 0.89078

C = 1.30358

R = 1.12616

$\frac{\sqrt{A^2 \cdot C \cdot (C-B)}}{\sqrt{C^2}} - R = 0.00000$

R

B

C

A

P_3

P_4

P_1

P_2

Unit = 1.00000

A = 1.75500

B = 1.07907

C = 1.43394

D = 0.72904

R = 0.55570

$\frac{A^2 \cdot D \cdot (C-B)}{C} - R = 0.00000$

Hide Line

R

D

B

C

A

P_3

P_4

P_1

P_2

Unit = 1.00000

A = 1.58361

B = 0.84974

C = 1.11287

D = 0.64213

R = 1.02289

$\frac{D\cdot(C-A^2\cdot(B-C))}{C}$-R = 0.00000

D

B

R

C

A

P_3

P_4

P_1

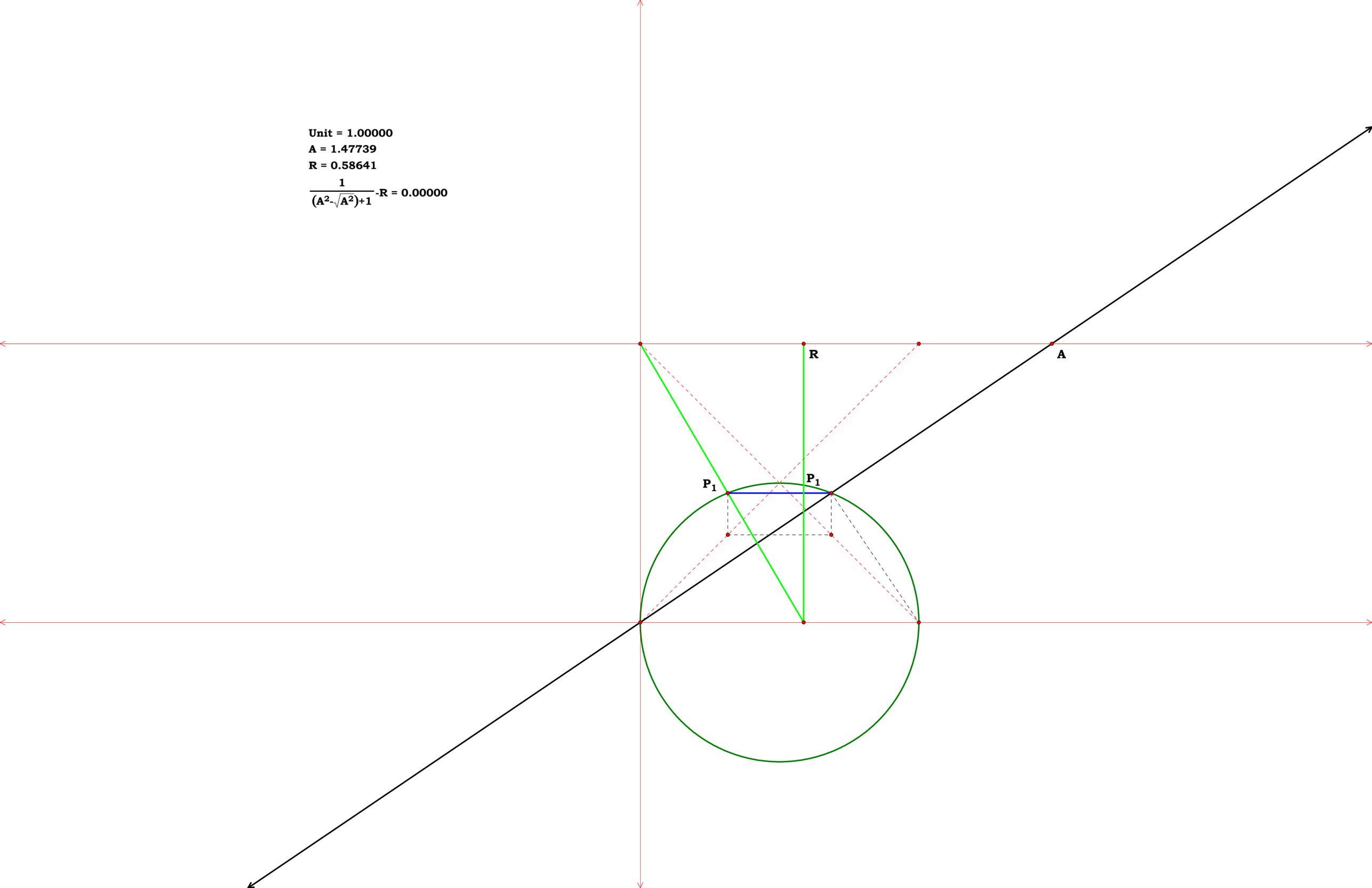
P_2

Unit = 1.00000

A = 1.47739

R = 0.58641

$$\frac{1}{(A^2-\sqrt{A^2})+1}-R = 0.00000$$

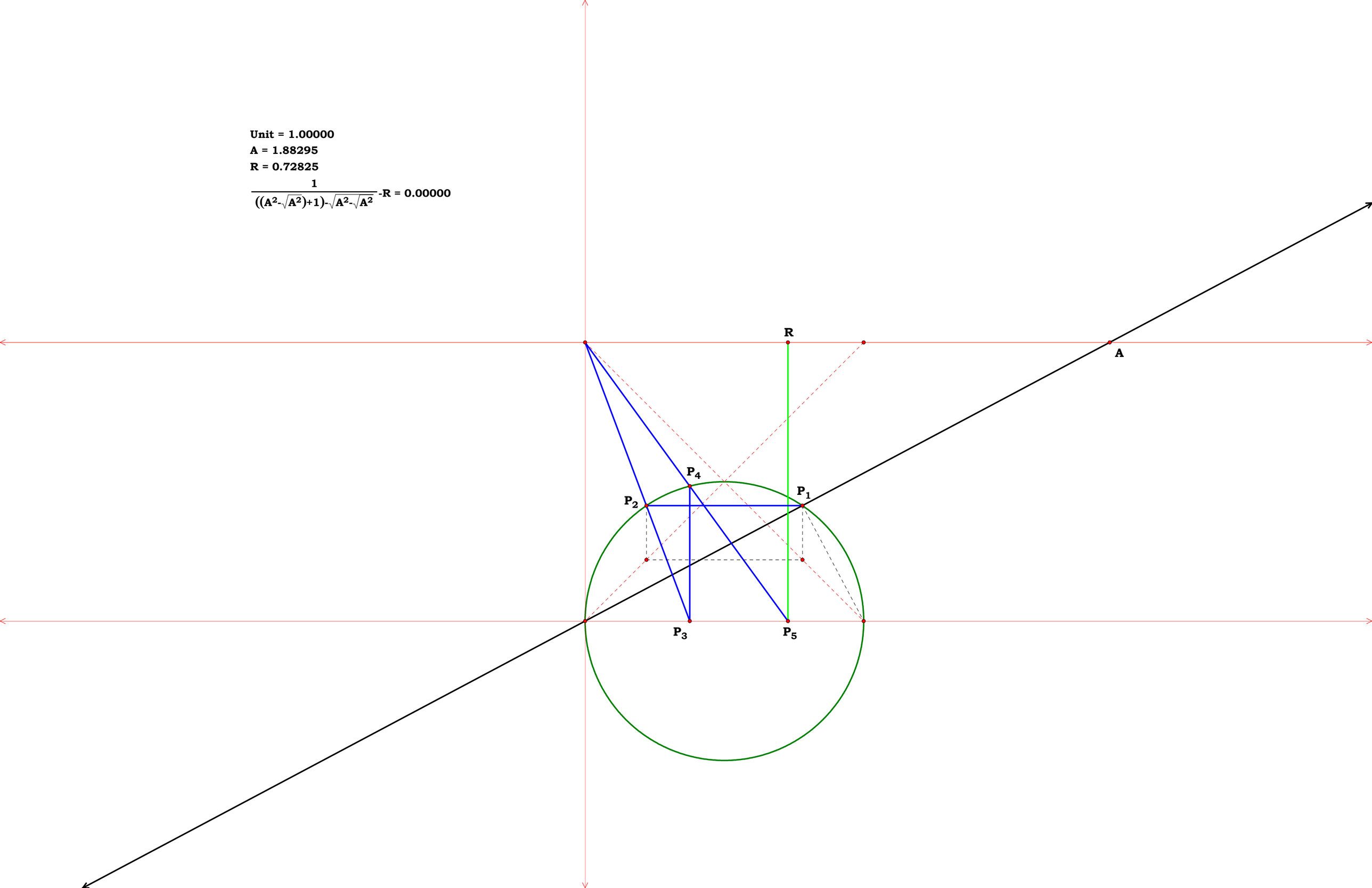


Unit = 1.00000

A = 1.88295

R = 0.72825

$$\frac{1}{((A^2-\sqrt{A^2})+1)-\sqrt{A^2-\sqrt{A^2}}}-R = 0.00000$$

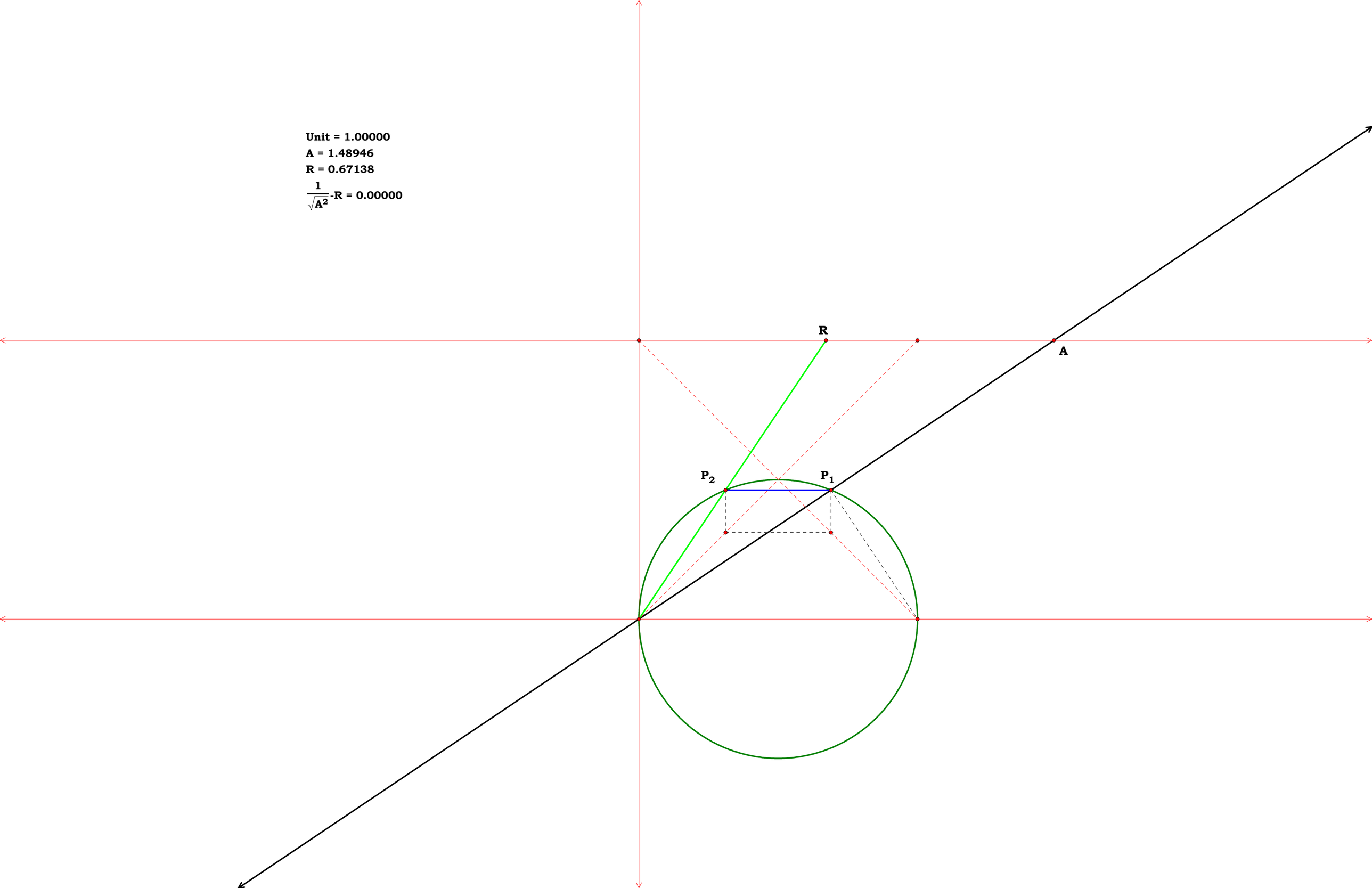


Unit = 1.00000

A = 1.48946

R = 0.67138

$$\frac{1}{\sqrt{A^2}} - R = 0.00000$$

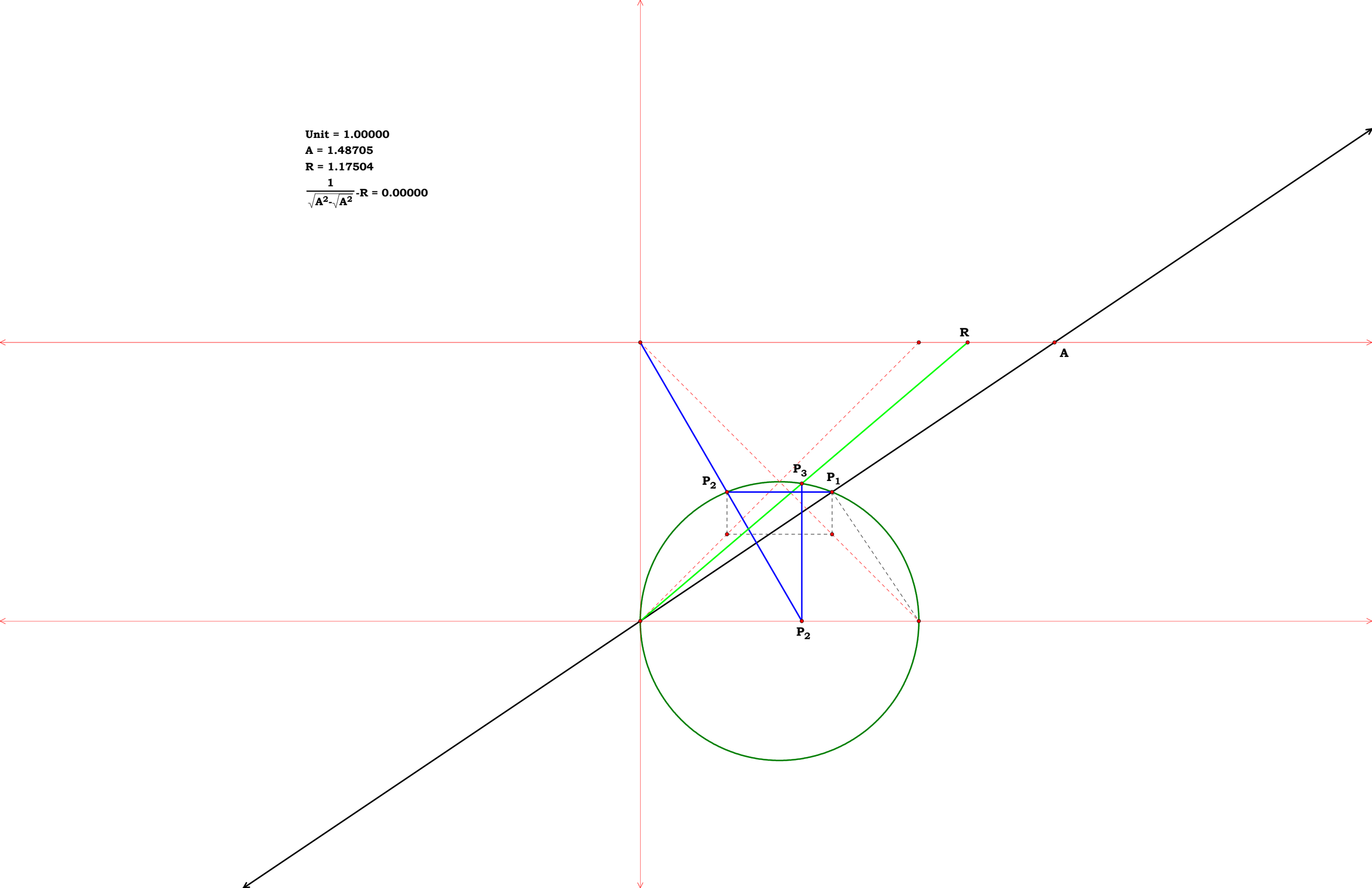


Unit = 1.00000

A = 1.48705

R = 1.17504

$$\frac{1}{\sqrt{A^2-\sqrt{A^2}}}-R = 0.00000$$

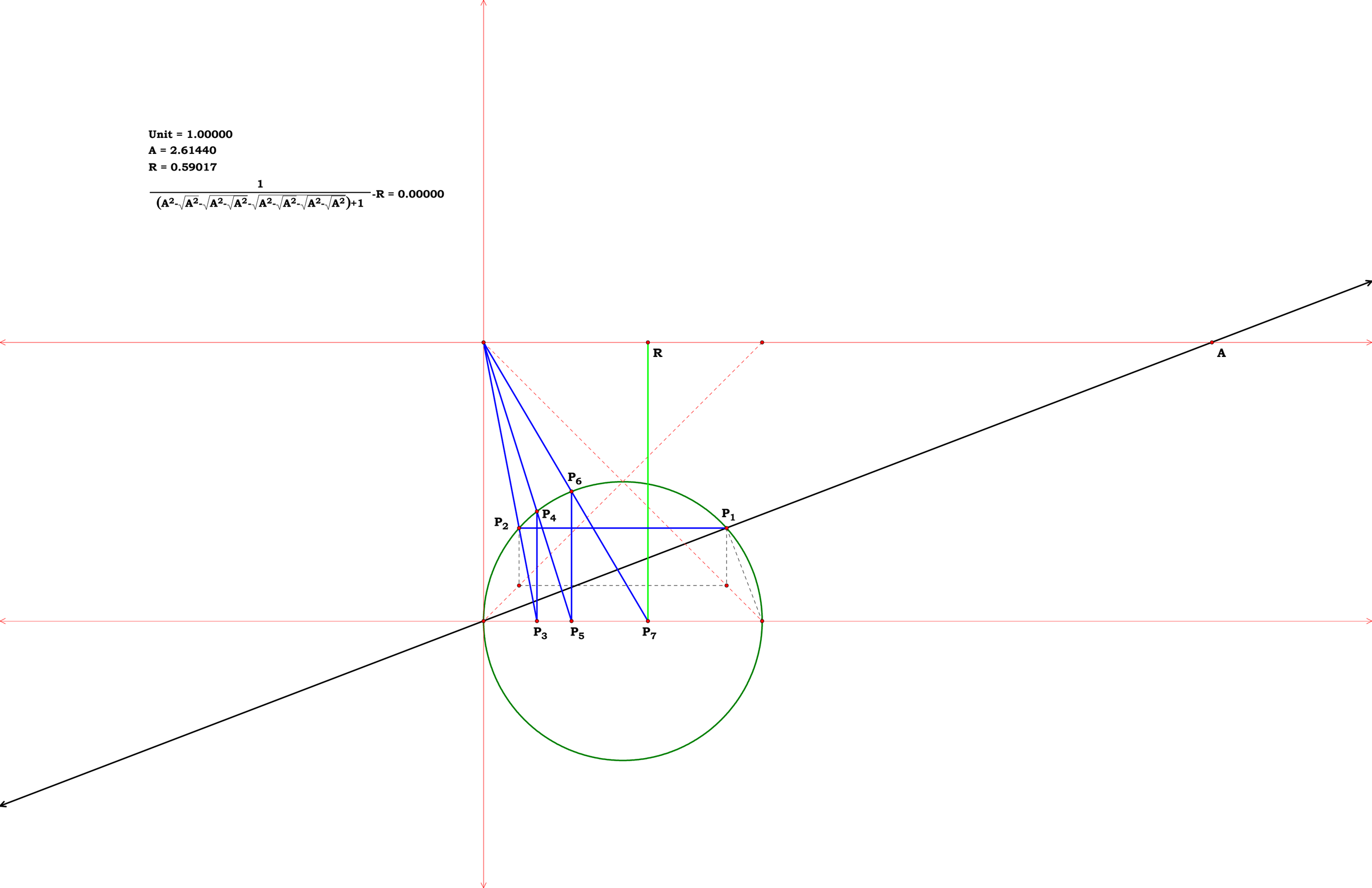


Unit = 1.00000

A = 2.61440

R = 0.59017

$$\frac{1}{\left(A^2-\sqrt{A^2-\sqrt{A^2-\sqrt{A^2-\sqrt{A^2-\sqrt{A^2}}}}}\right)+1}-R = 0.00000$$

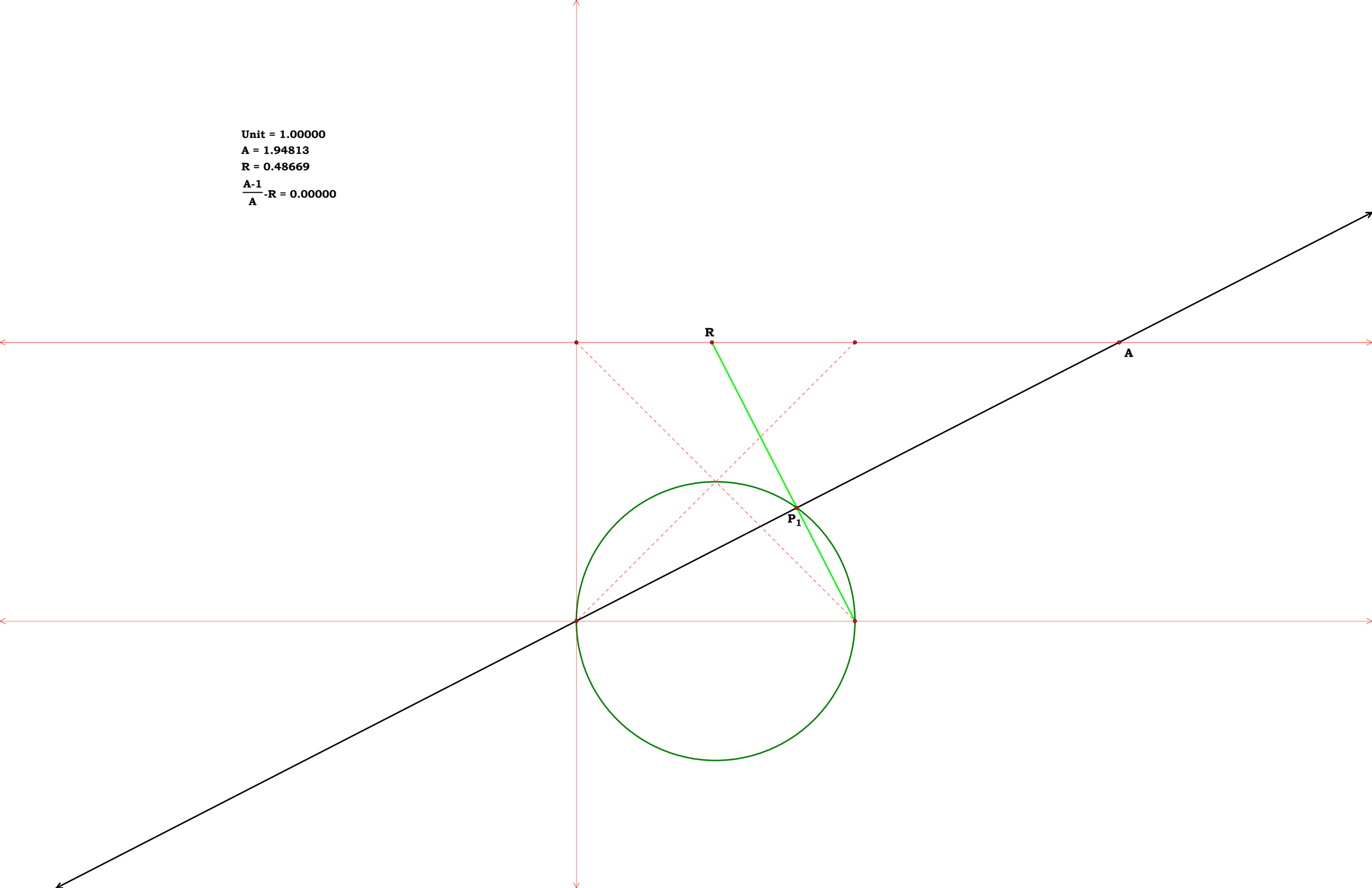


Unit = 1.00000

A = 1.94813

R = 0.48669

$\frac{A-1}{A}$-R = 0.00000

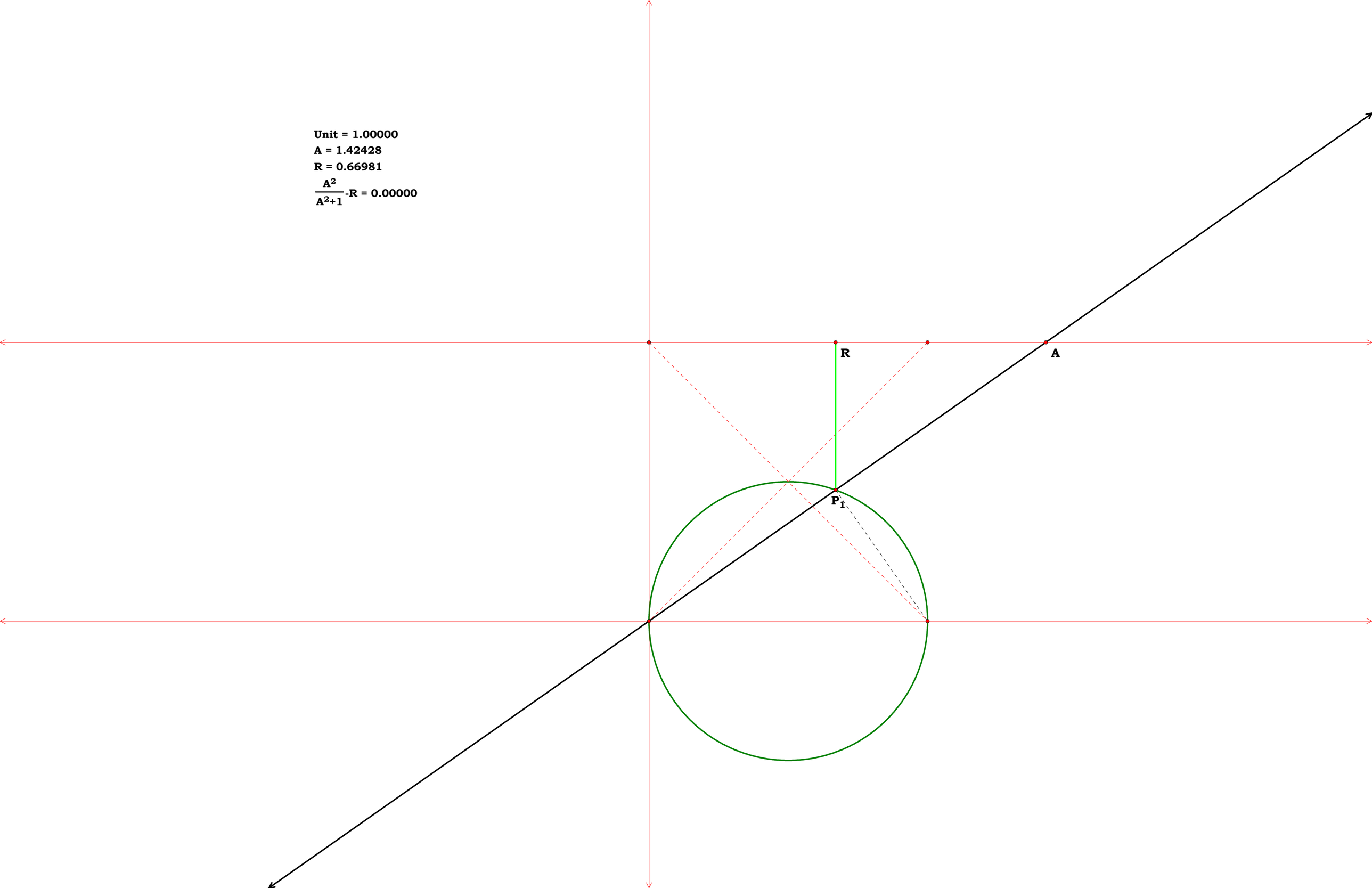


Unit = 1.00000

A = 1.42428

R = 0.66981

$$\frac{A^2}{A^2+1} - R = 0.00000$$



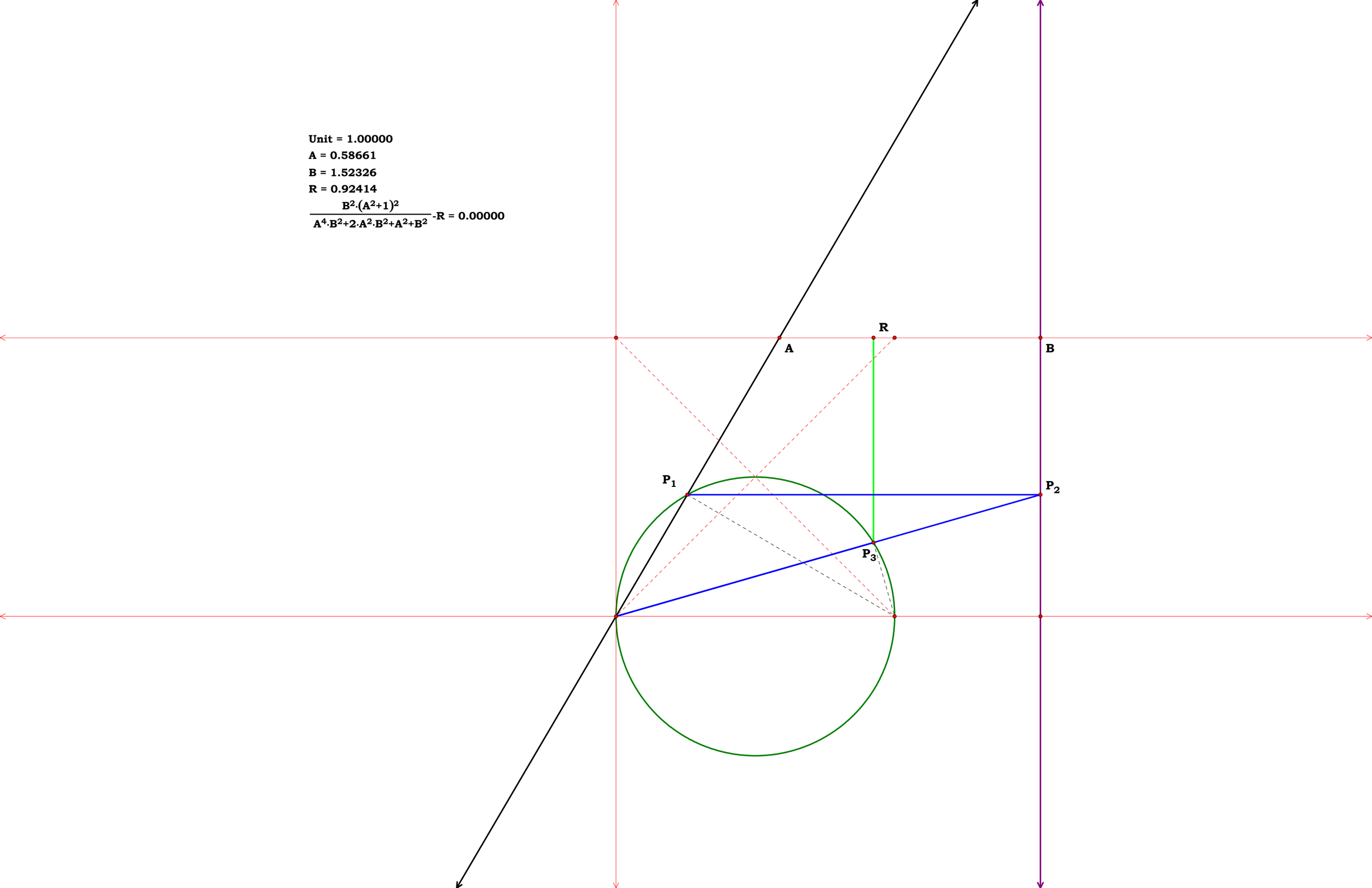
Unit = 1.00000

A = 0.58661

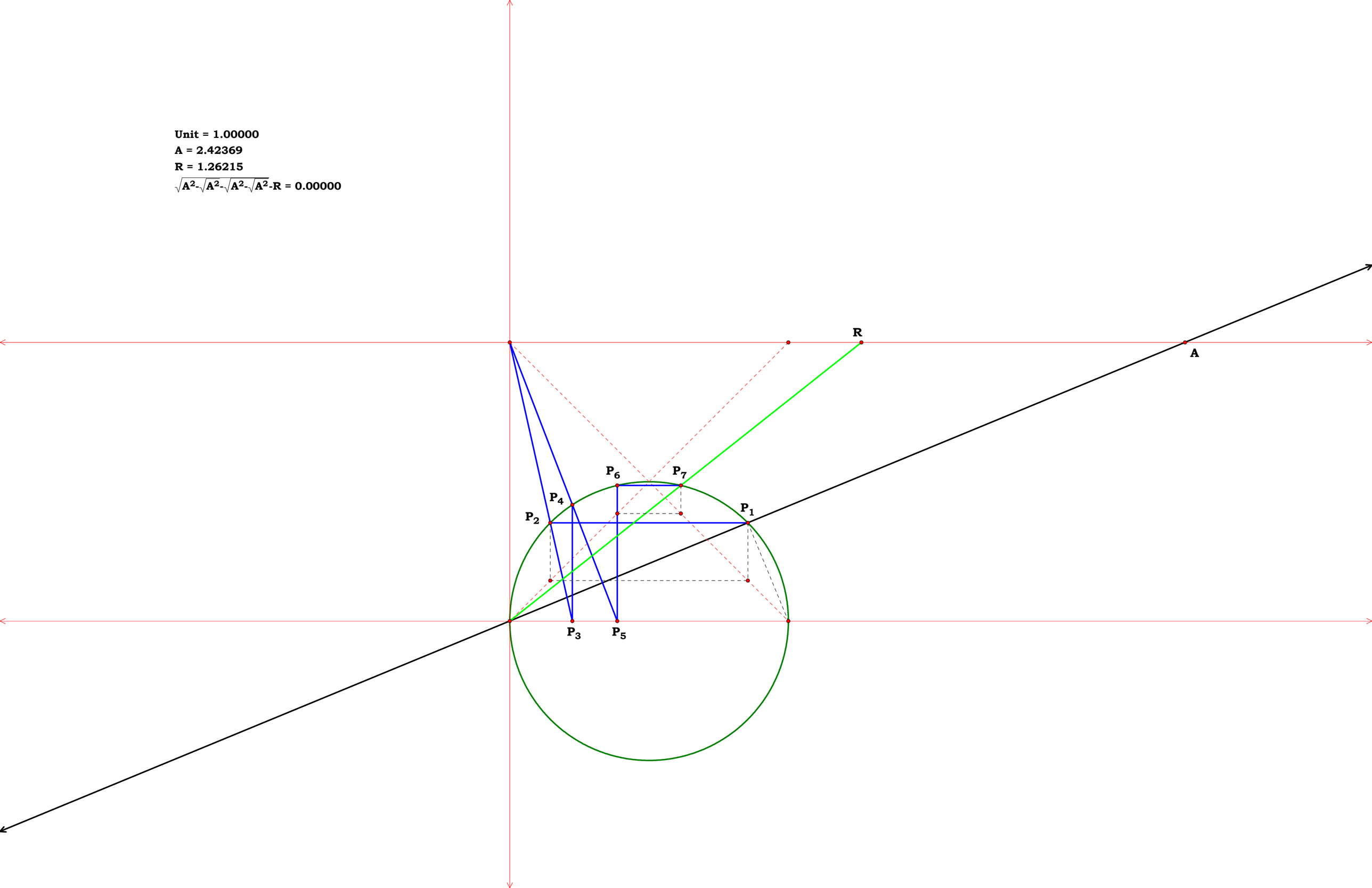
B = 1.52326

R = 0.92414

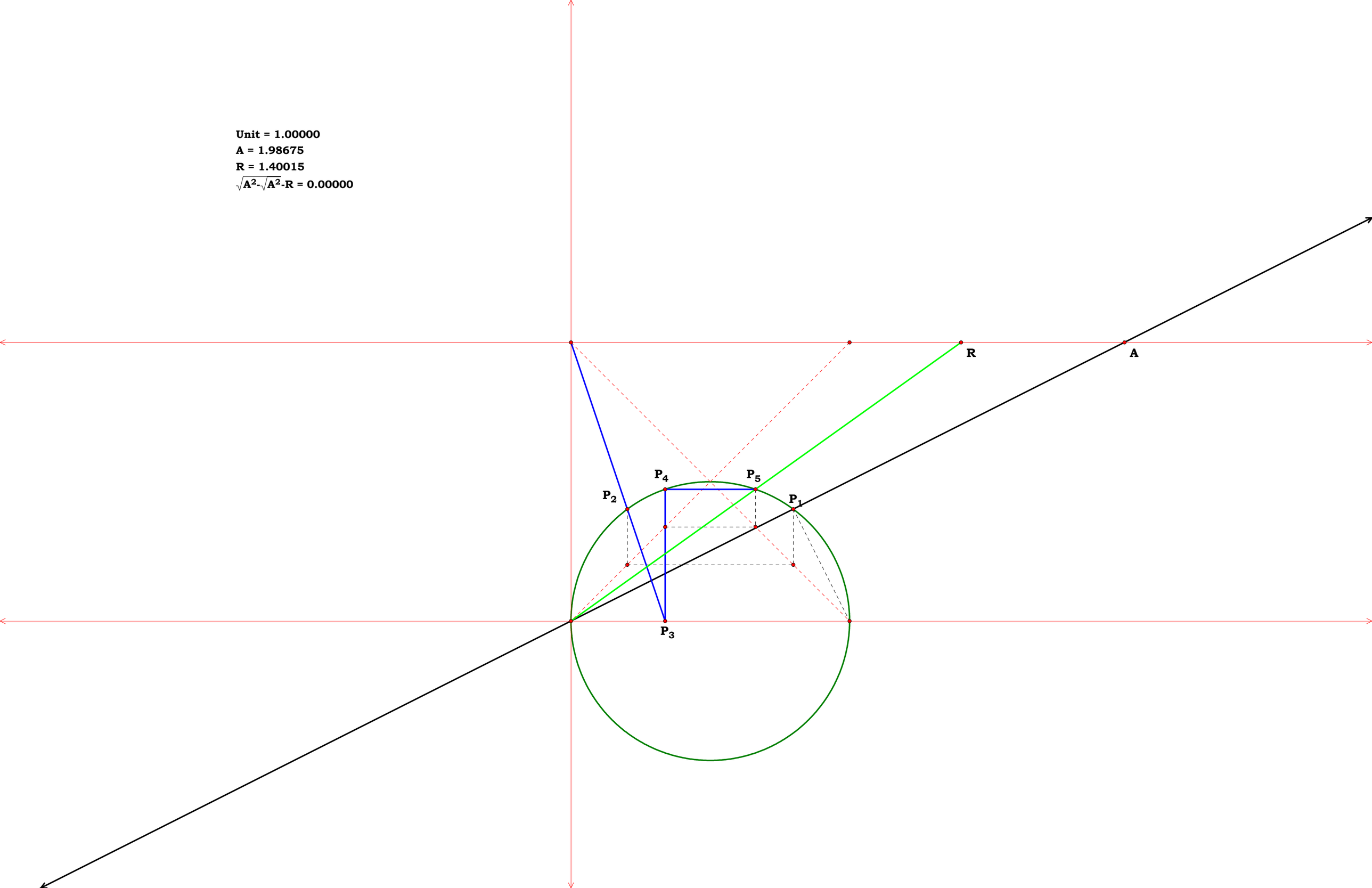
$$\frac{B^2\cdot(A^2+1)^2}{A^4\cdot B^2+2\cdot A^2\cdot B^2+A^2+B^2}-R = 0.00000$$



Unit = 1.00000
A = 2.42369
R = 1.26215
$\sqrt{A^2-\sqrt{A^2}-\sqrt{A^2-\sqrt{A^2}}}-R = 0.00000$



Unit = 1.00000
A = 1.98675
R = 1.40015
$\sqrt{A^2-\sqrt{A^2}-R} = 0.00000$



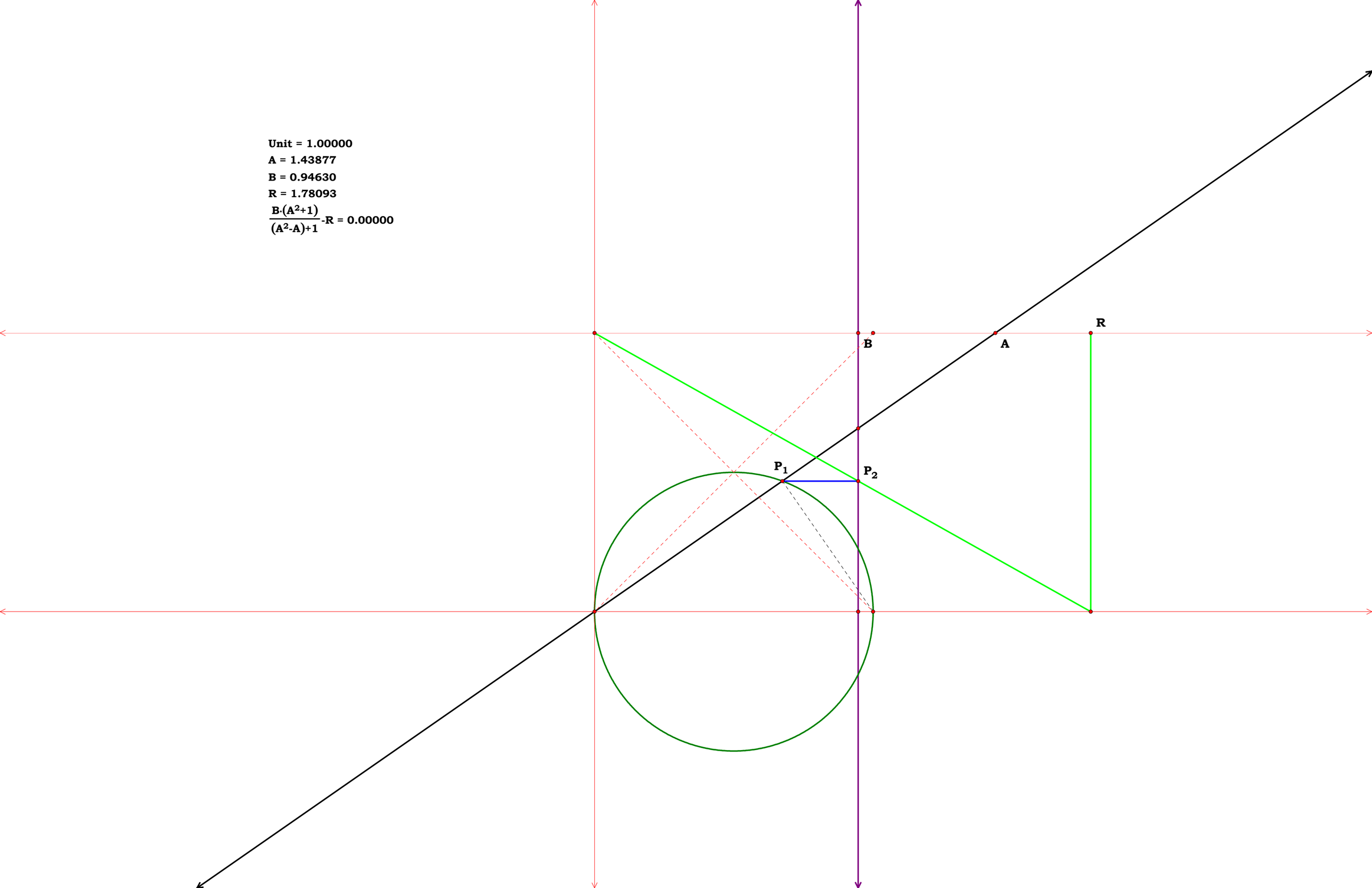
Unit = 1.00000

A = 1.43877

B = 0.94630

R = 1.78093

$\frac{B\cdot(A^2+1)}{(A^2-A)+1}$-R = 0.00000



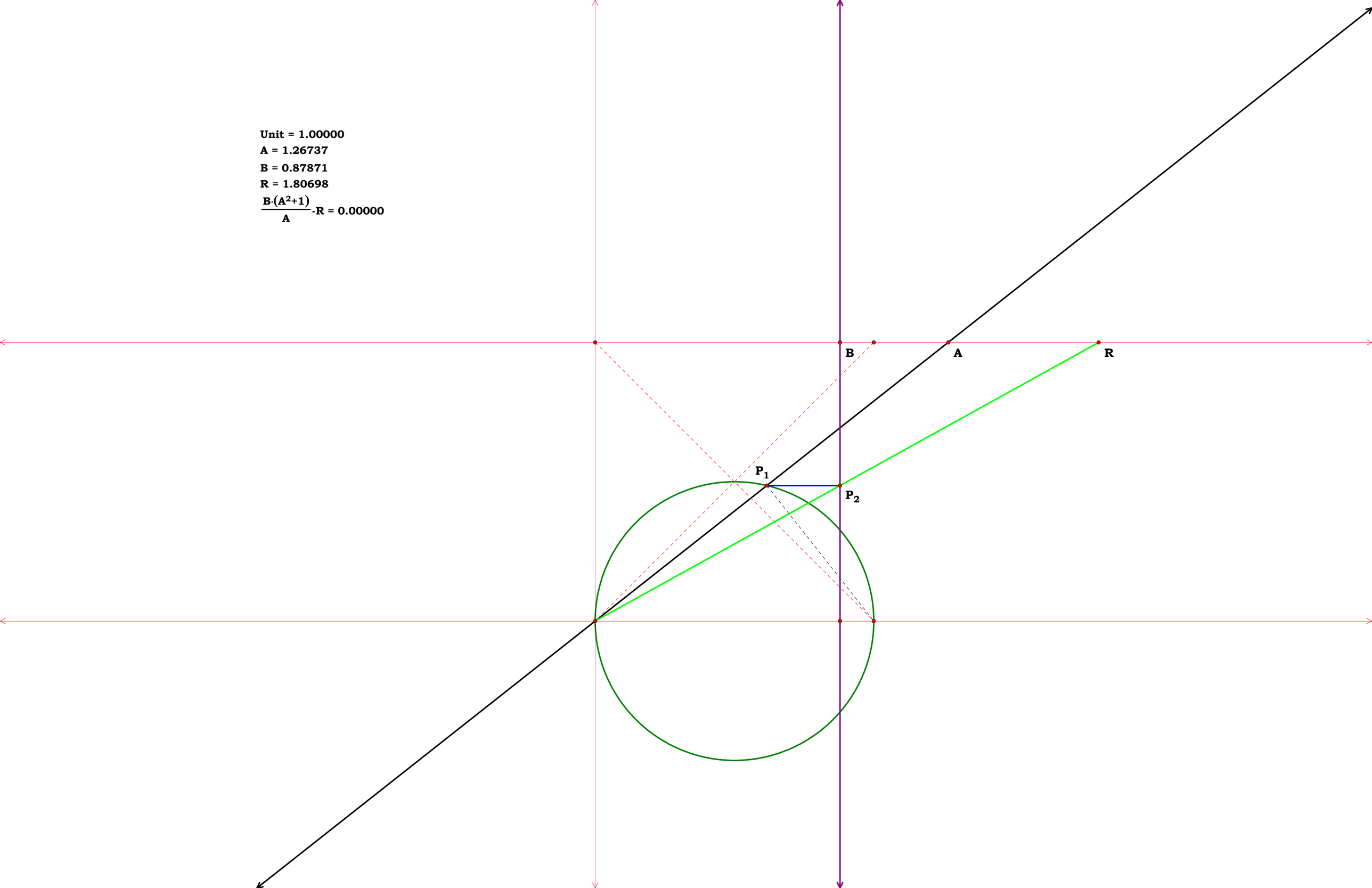
Unit = 1.00000

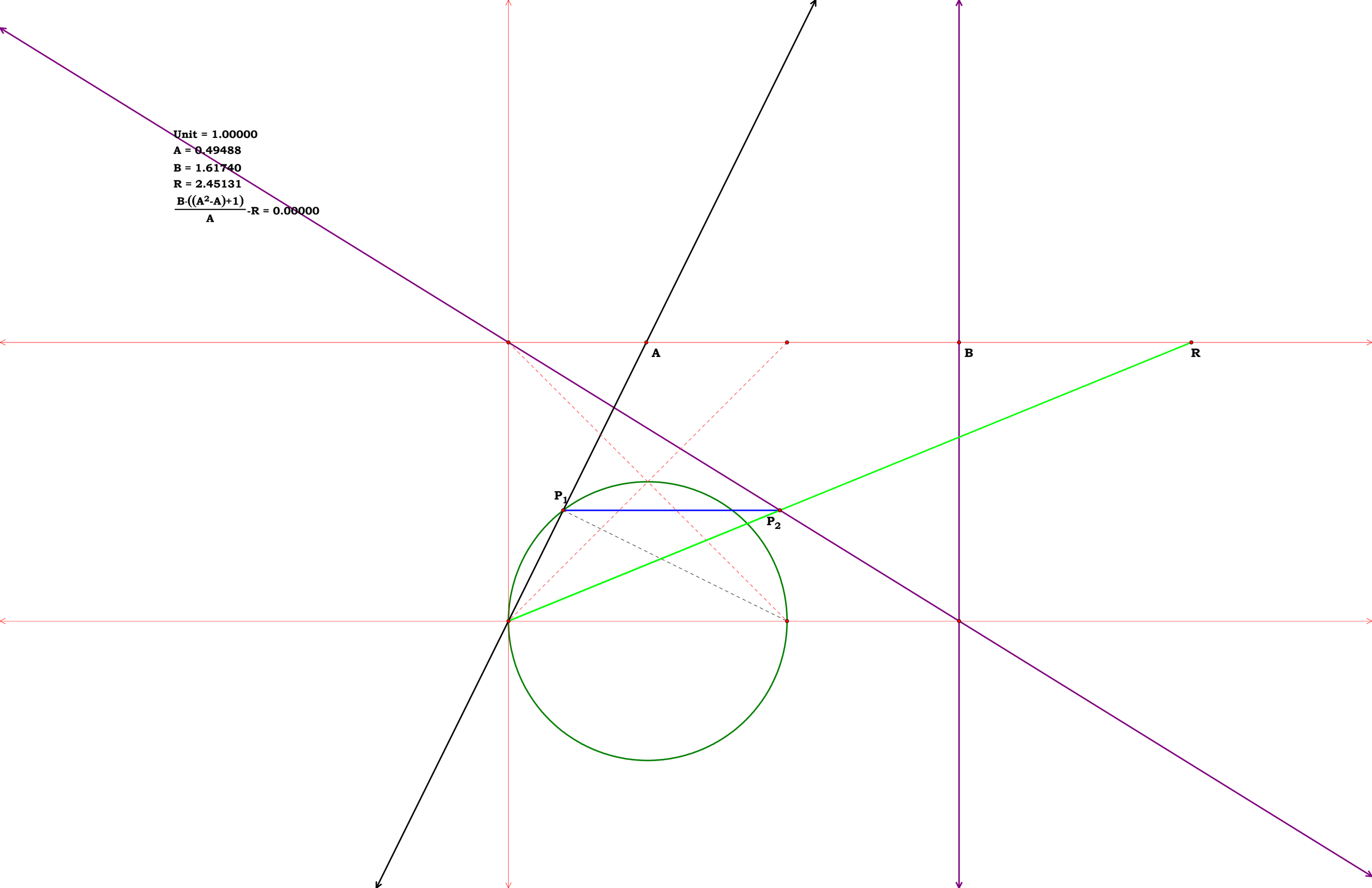
A = 1.26737

B = 0.87871

R = 1.80698

$\frac{B\cdot(A^2+1)}{A}$-R = 0.00000



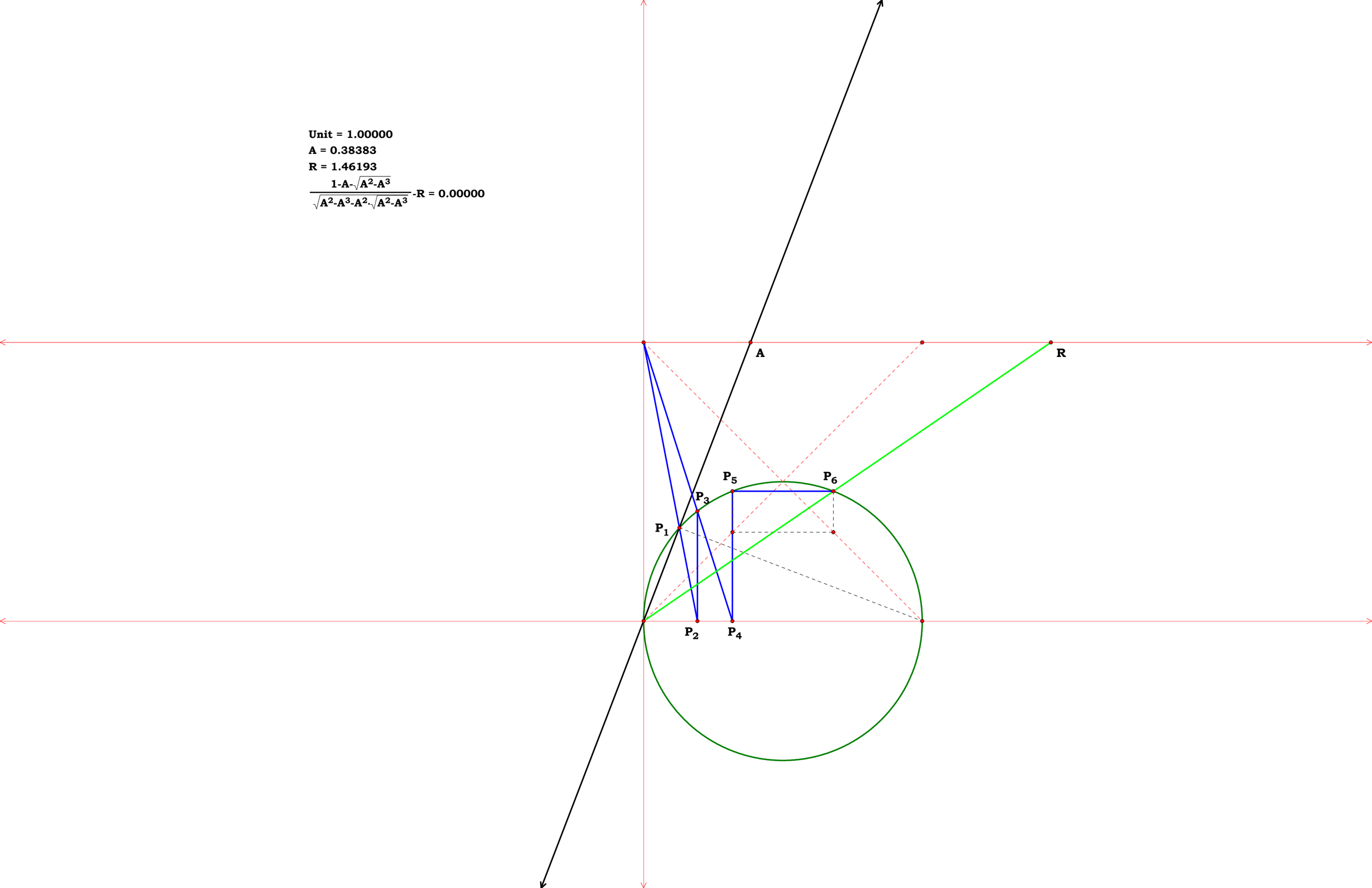

Unit = 1.00000
A = 0.49488
B = 1.61740
R = 2.45131
$\frac{B\cdot((A^2-A)+1)}{A}$-R = 0.00000
A
B
R
P_1
P_2

Unit = 1.00000

A = 0.38383

R = 1.46193

$$\frac{1-A-\sqrt{A^2-A^3}}{\sqrt{A^2-A^3-A^2\cdot\sqrt{A^2-A^3}}}-R = 0.00000$$

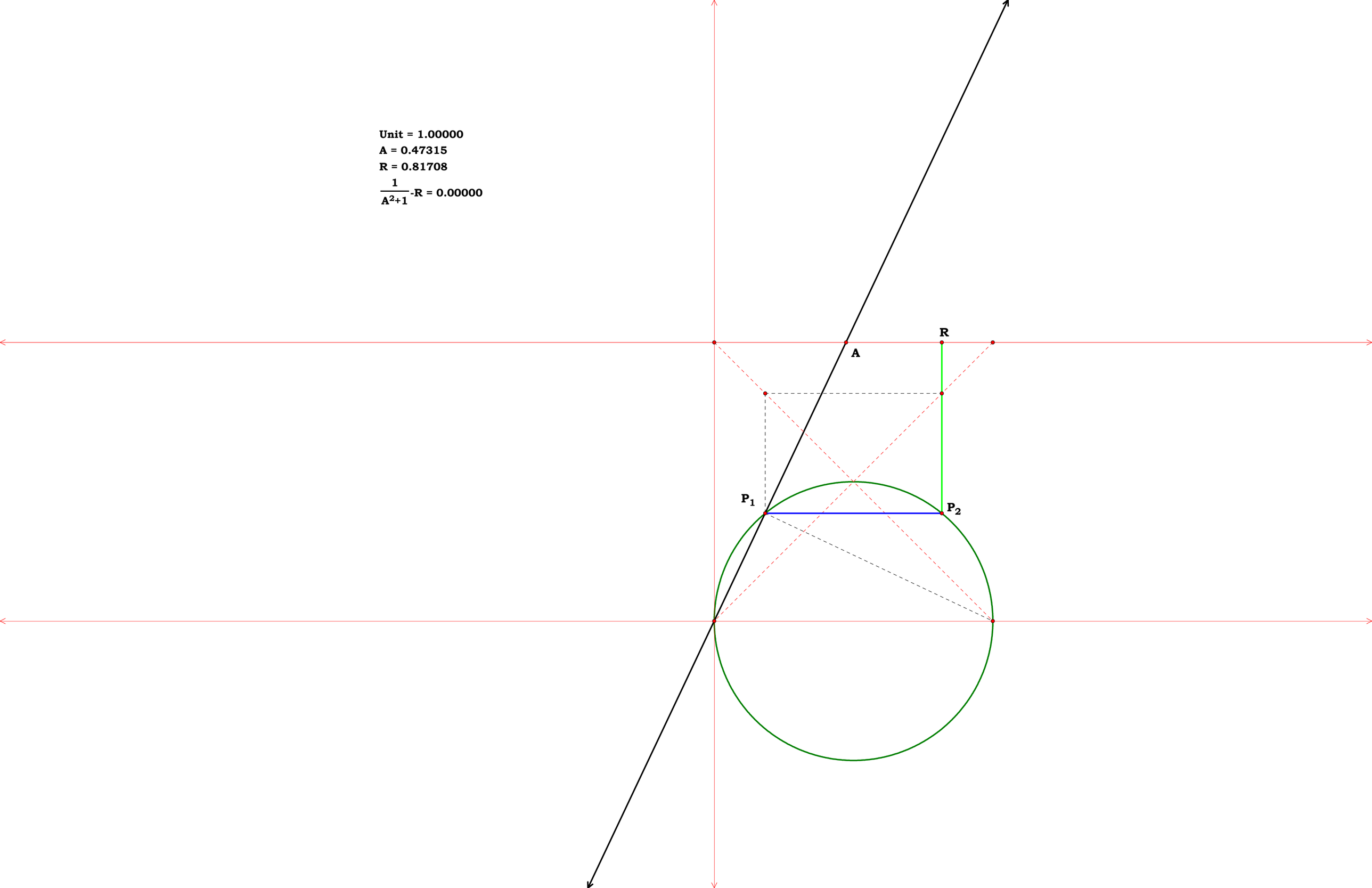


Unit = 1.00000

A = 0.47315

R = 0.81708

$$\frac{1}{A^2+1}-R = 0.00000$$

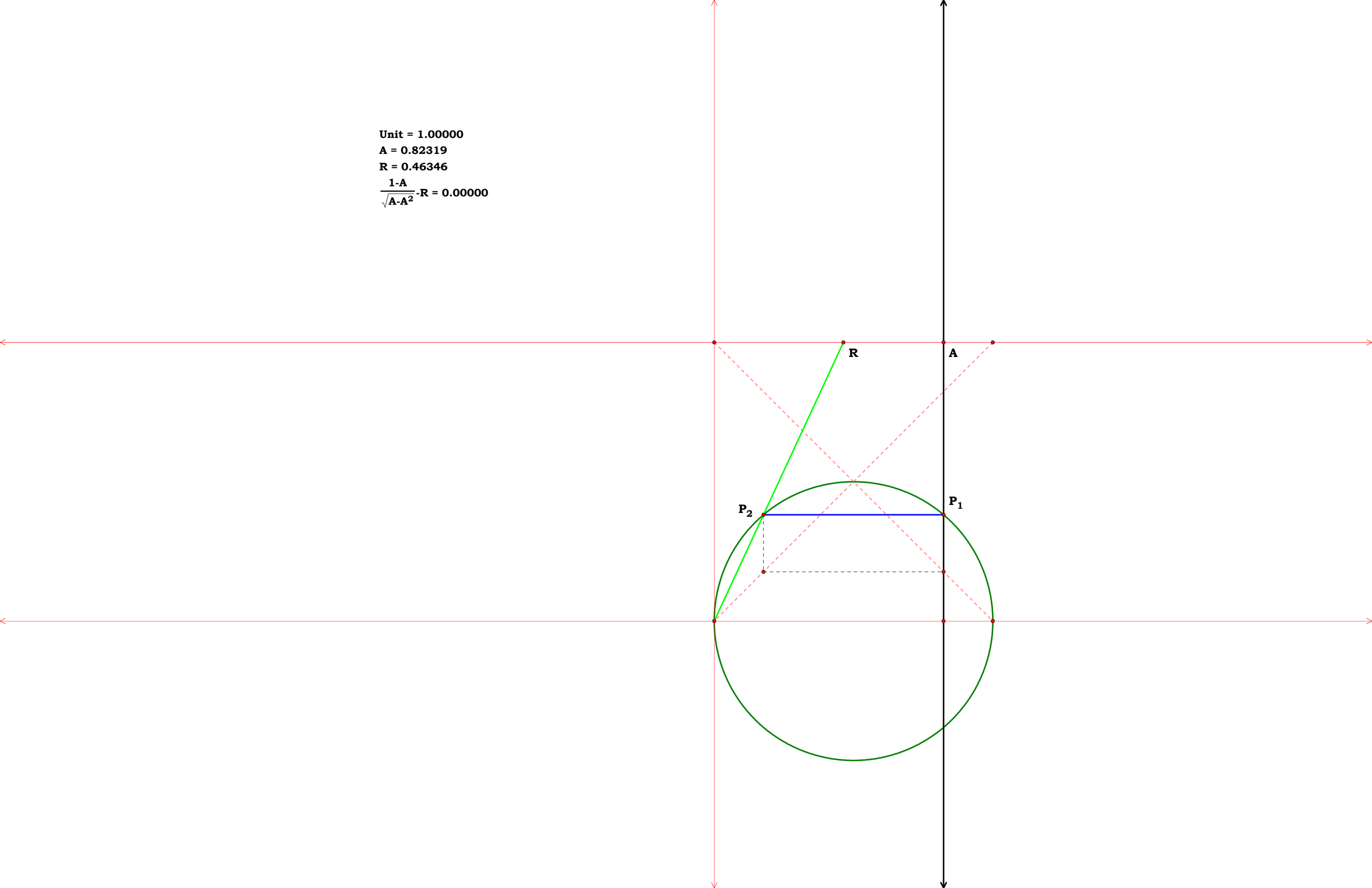


Unit = 1.00000

A = 0.82319

R = 0.46346

$$\frac{1-A}{\sqrt{A-A^2}}-R = 0.00000$$



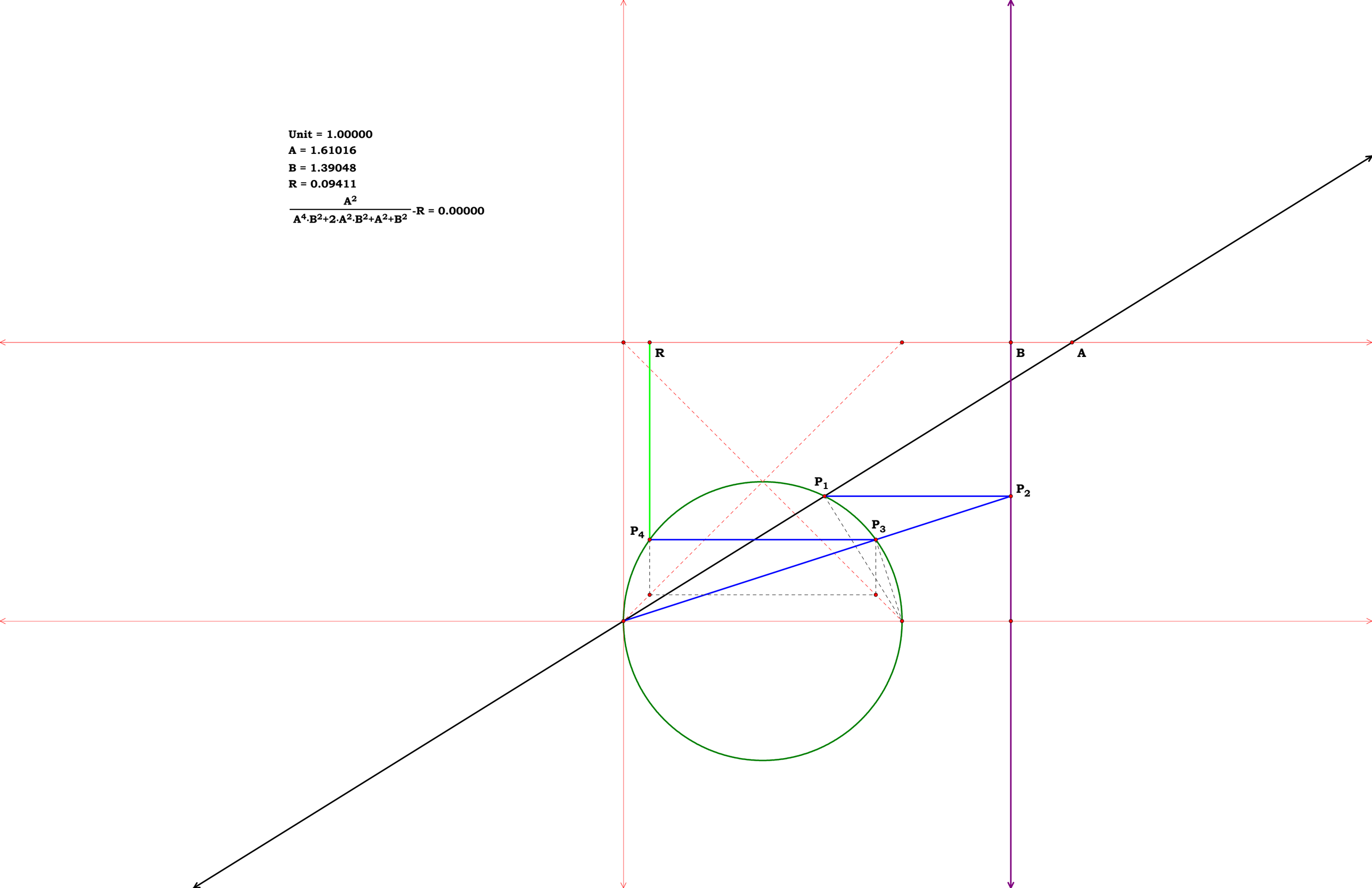
Unit = 1.00000

A = 1.61016

B = 1.39048

R = 0.09411

$$\frac{A^2}{A^4 \cdot B^2 + 2 \cdot A^2 \cdot B^2 + A^2 + B^2} - R = 0.00000$$



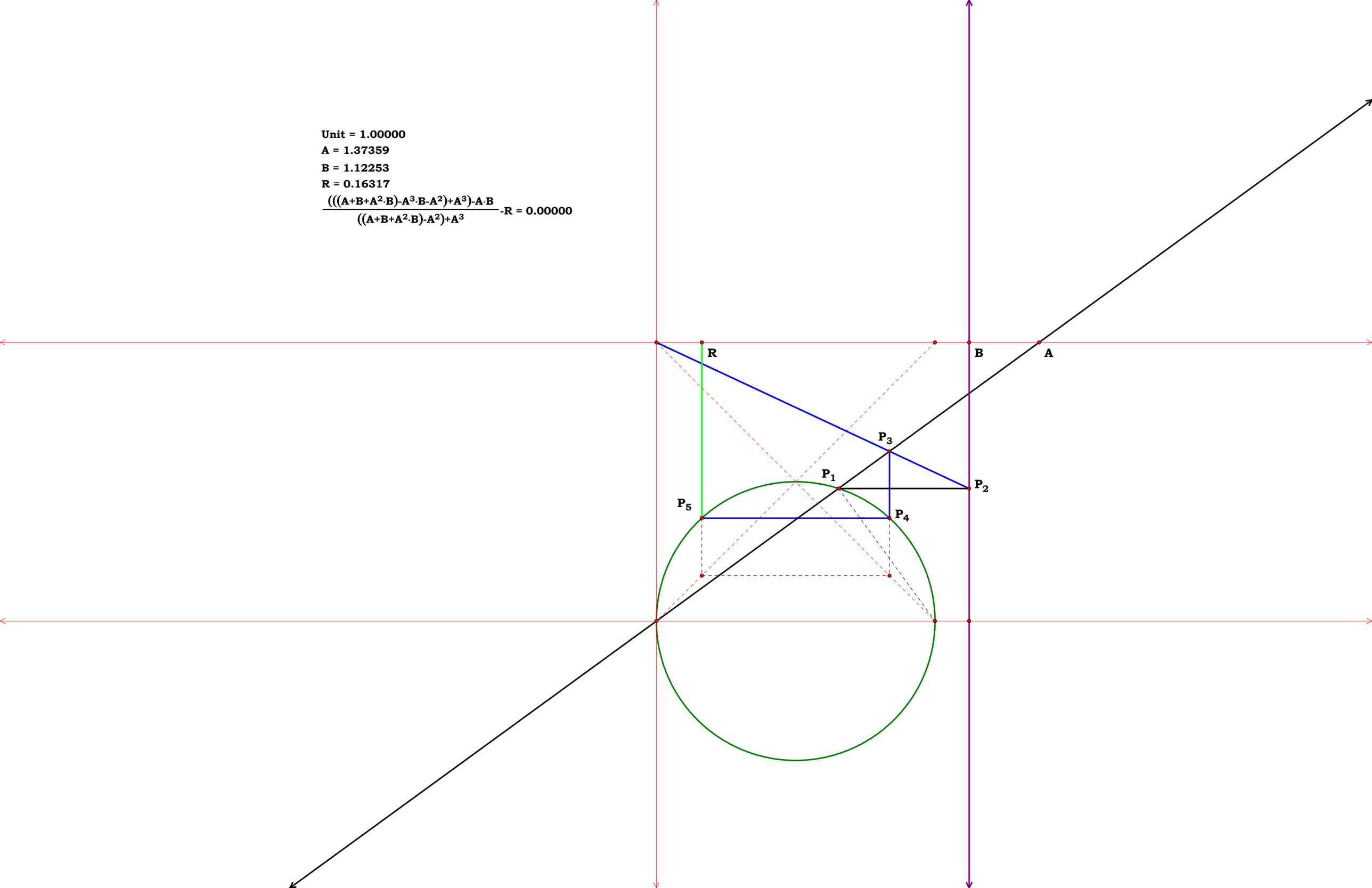
Unit = 1.00000

A = 1.37359

B = 1.12253

R = 0.16317

$$\frac{(((A+B+A^2\cdot B)-A^3\cdot B-A^2)+A^3)-A\cdot B}{((A+B+A^2\cdot B)-A^2)+A^3}-R = 0.00000$$



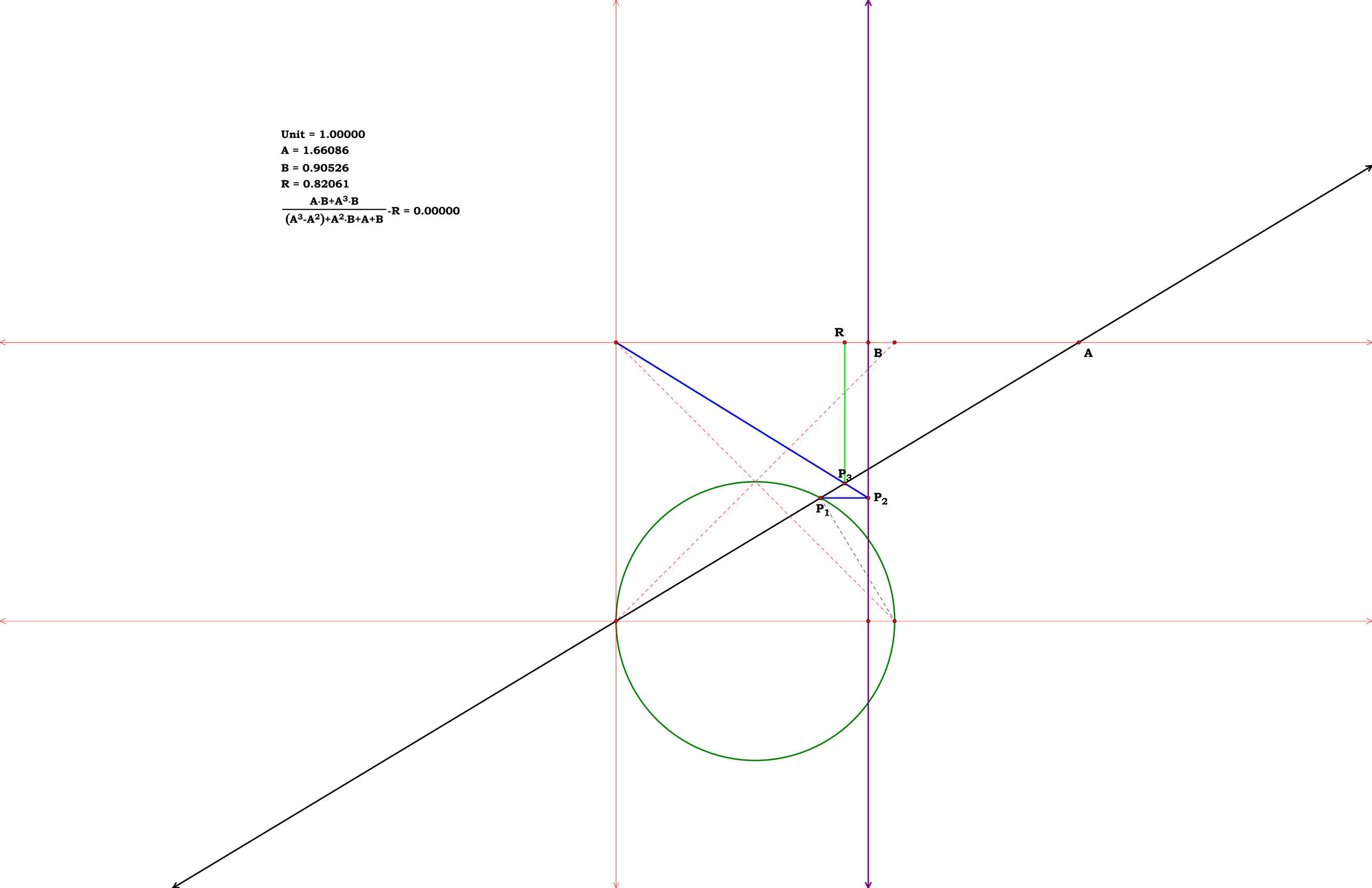
Unit = 1.00000

A = 1.66086

B = 0.90526

R = 0.82061

$$\frac{A\cdot B+A^3\cdot B}{(A^3-A^2)+A^2\cdot B+A+B}-R = 0.00000$$



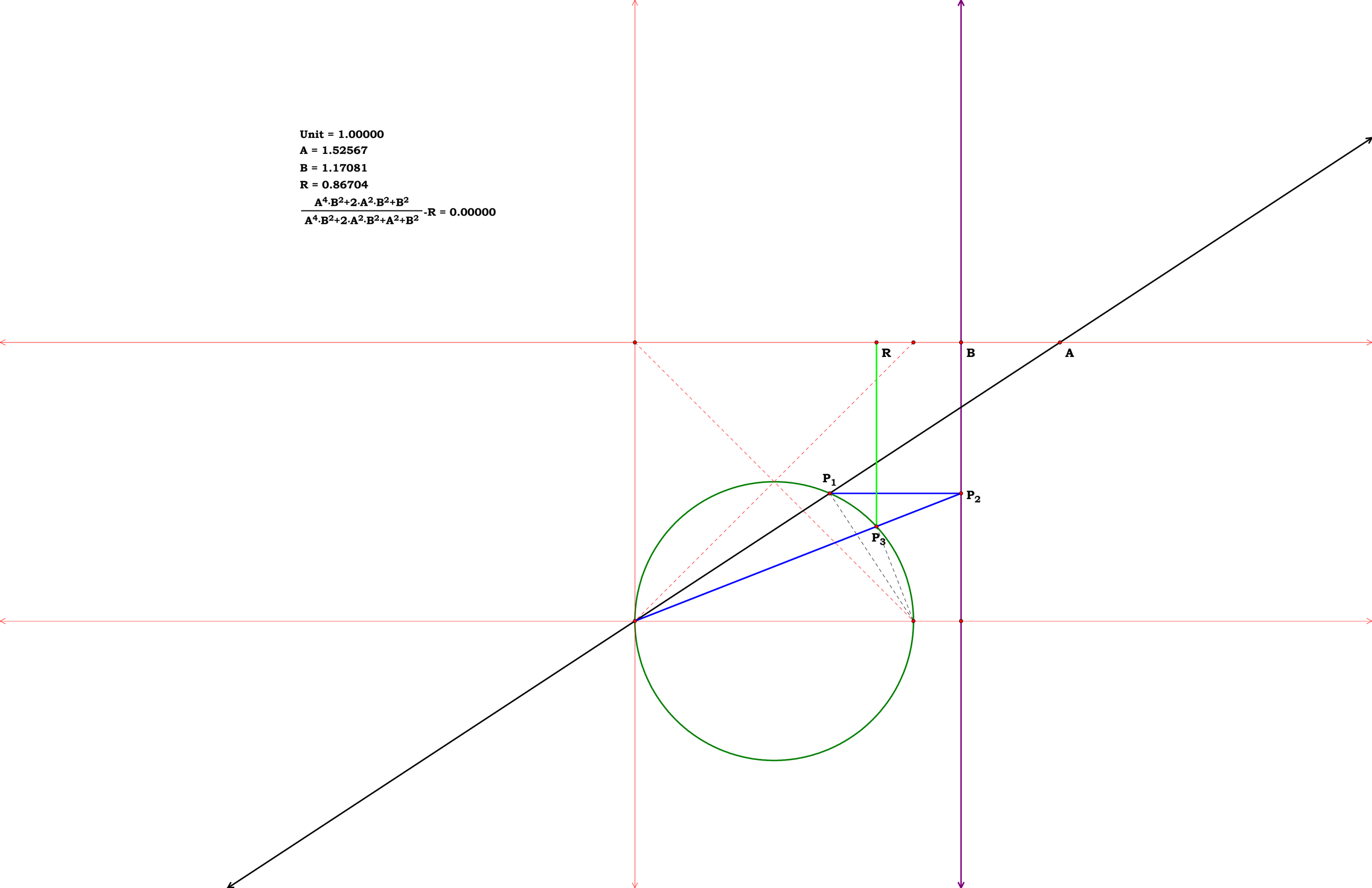
Unit = 1.00000

A = 1.52567

B = 1.17081

R = 0.86704

$$\frac{A^4 \cdot B^2 + 2 \cdot A^2 \cdot B^2 + B^2}{A^4 \cdot B^2 + 2 \cdot A^2 \cdot B^2 + A^2 + B^2} - R = 0.00000$$



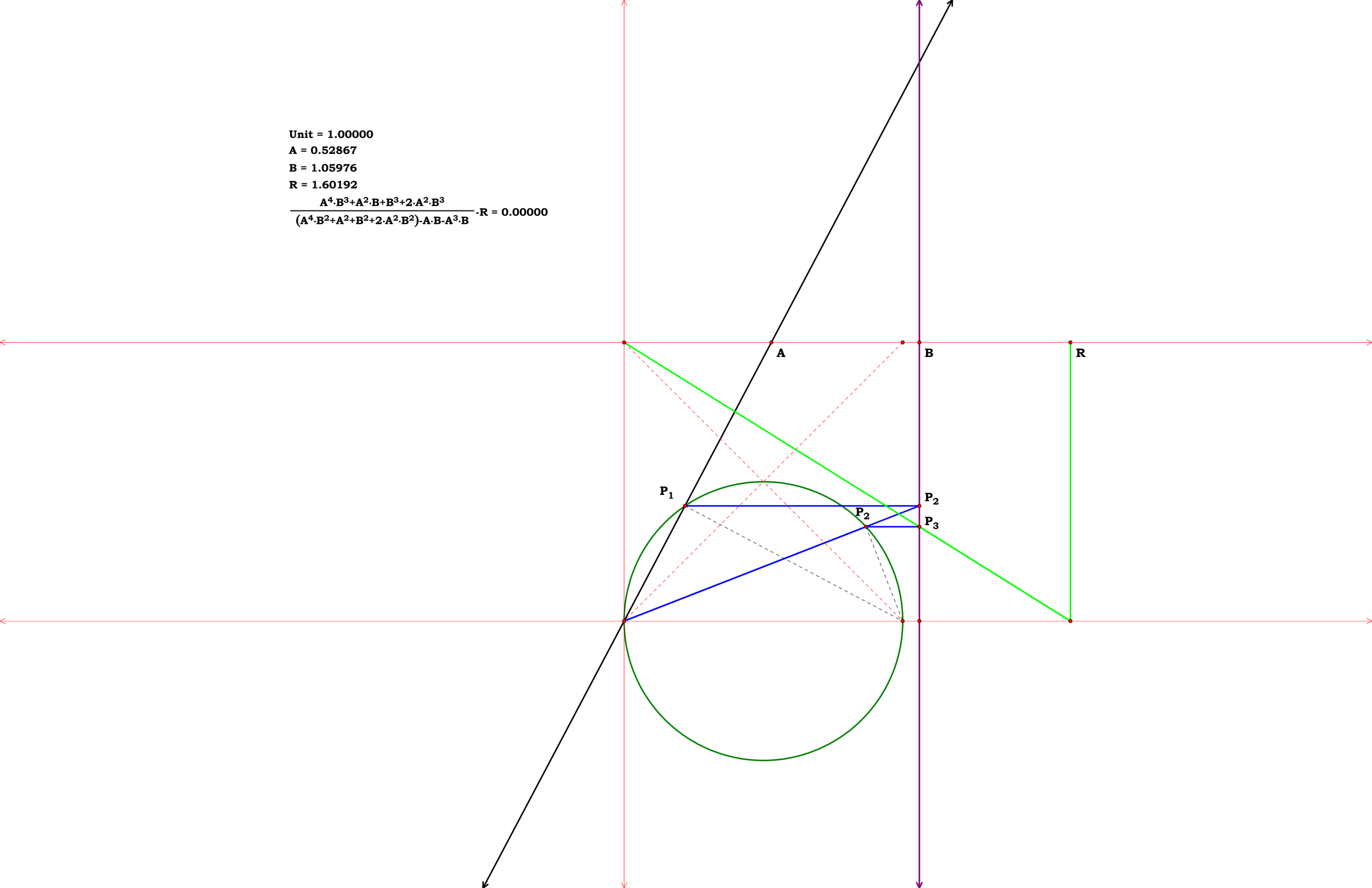
Unit = 1.00000

A = 0.52867

B = 1.05976

R = 1.60192

$$\frac{A^4 \cdot B^3 + A^2 \cdot B + B^3 + 2 \cdot A^2 \cdot B^3}{(A^4 \cdot B^2 + A^2 + B^2 + 2 \cdot A^2 \cdot B^2) - A \cdot B - A^3 \cdot B} - R = 0.00000$$



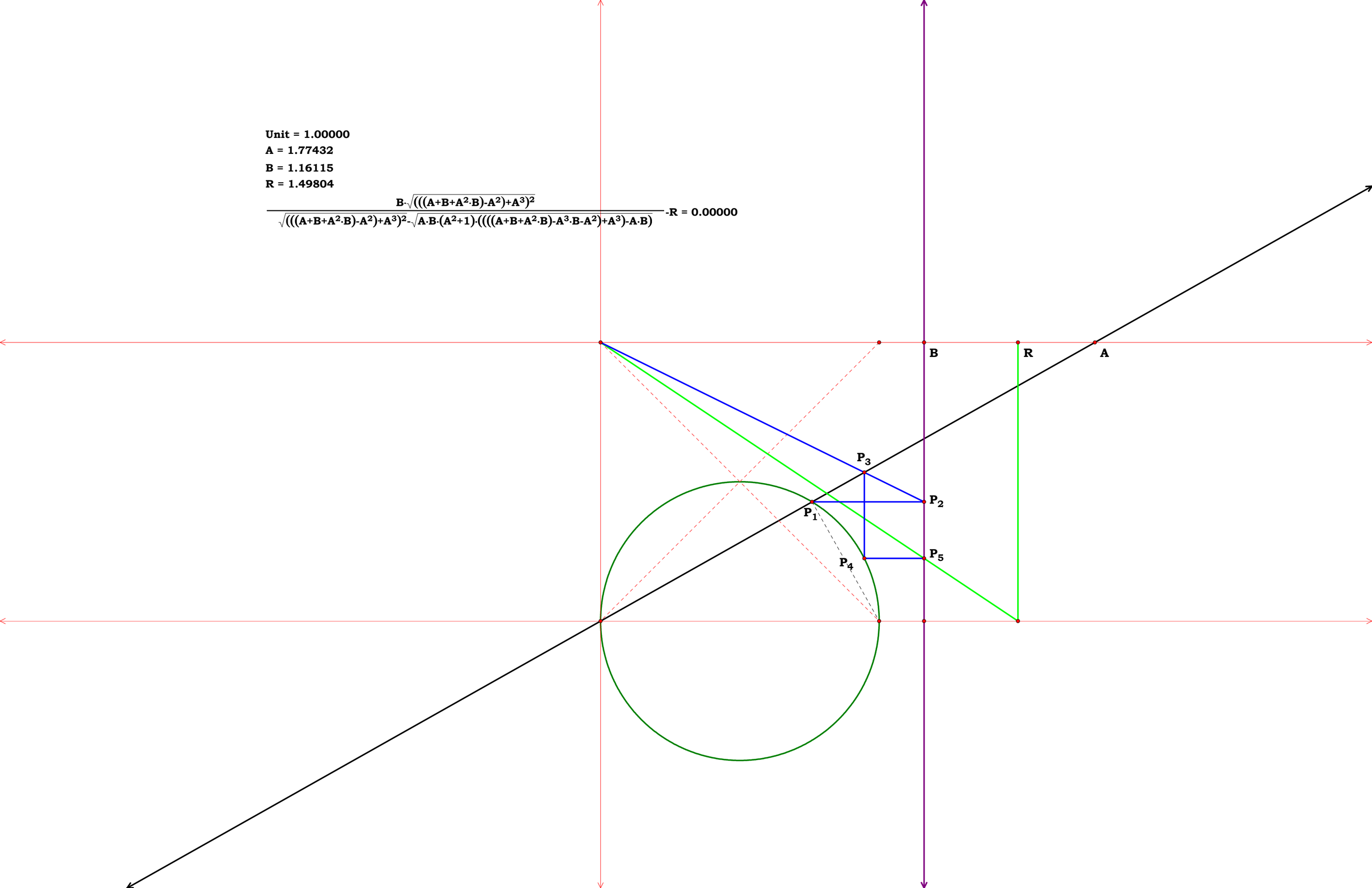
Unit = 1.00000

A = 1.77432

B = 1.16115

R = 1.49804

$$\frac{B\cdot\sqrt{(((A+B+A^2\cdot B)-A^2)+A^3)^2}}{\sqrt{(((A+B+A^2\cdot B)-A^2)+A^3)^2}-\sqrt{A\cdot B\cdot(A^2+1)\cdot((((A+B+A^2\cdot B)-A^3\cdot B-A^2)+A^3)-A\cdot B)}}-R = 0.00000$$



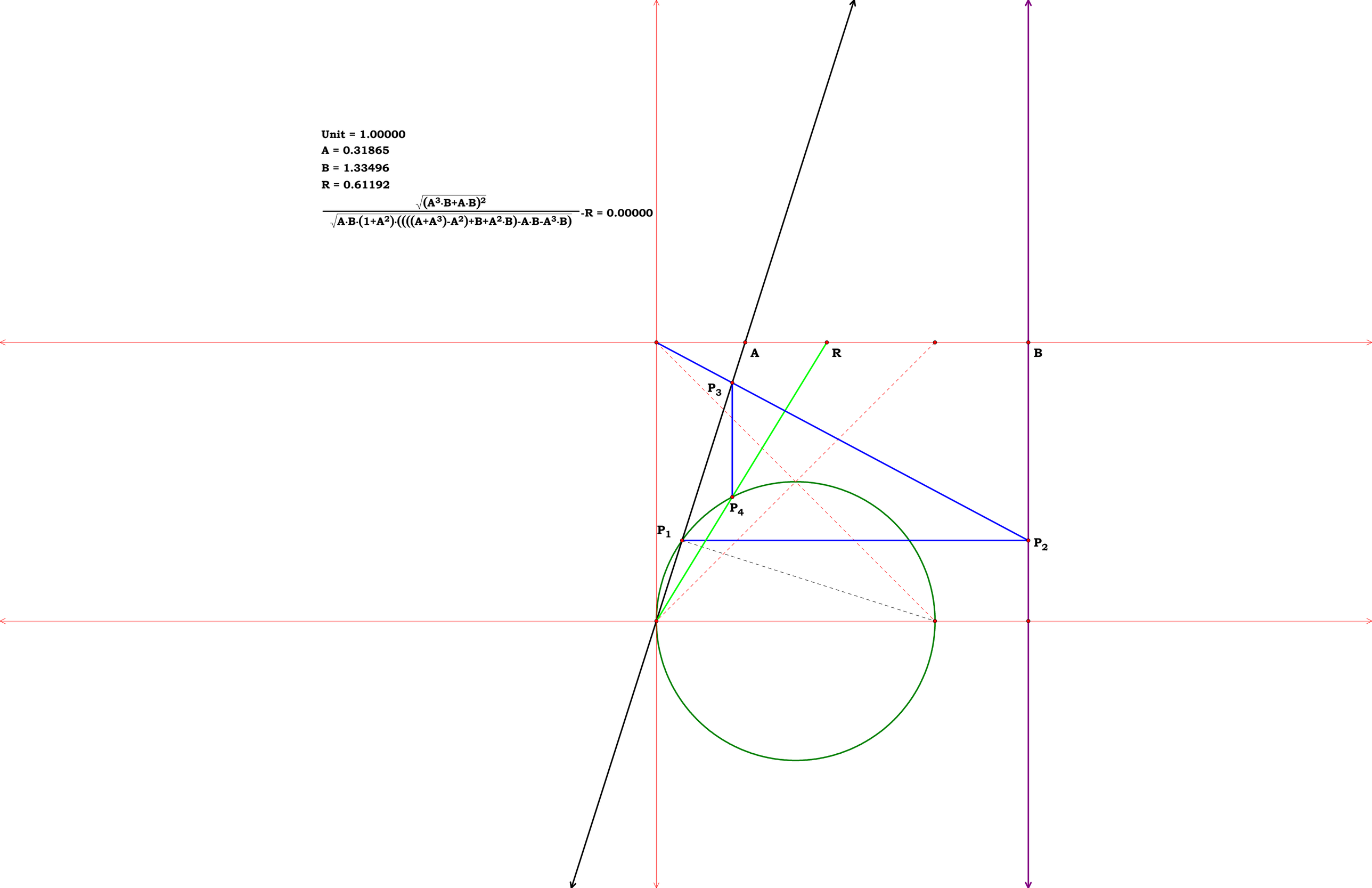
Unit = 1.00000

A = 0.31865

B = 1.33496

R = 0.61192

$$\frac{\sqrt{(A^3 \cdot B + A \cdot B)^2}}{\sqrt{A \cdot B \cdot (1+A^2) \cdot ((((A+A^3)-A^2)+B+A^2 \cdot B)-A \cdot B-A^3 \cdot B)}} - R = 0.00000$$



Unit = 1.00000

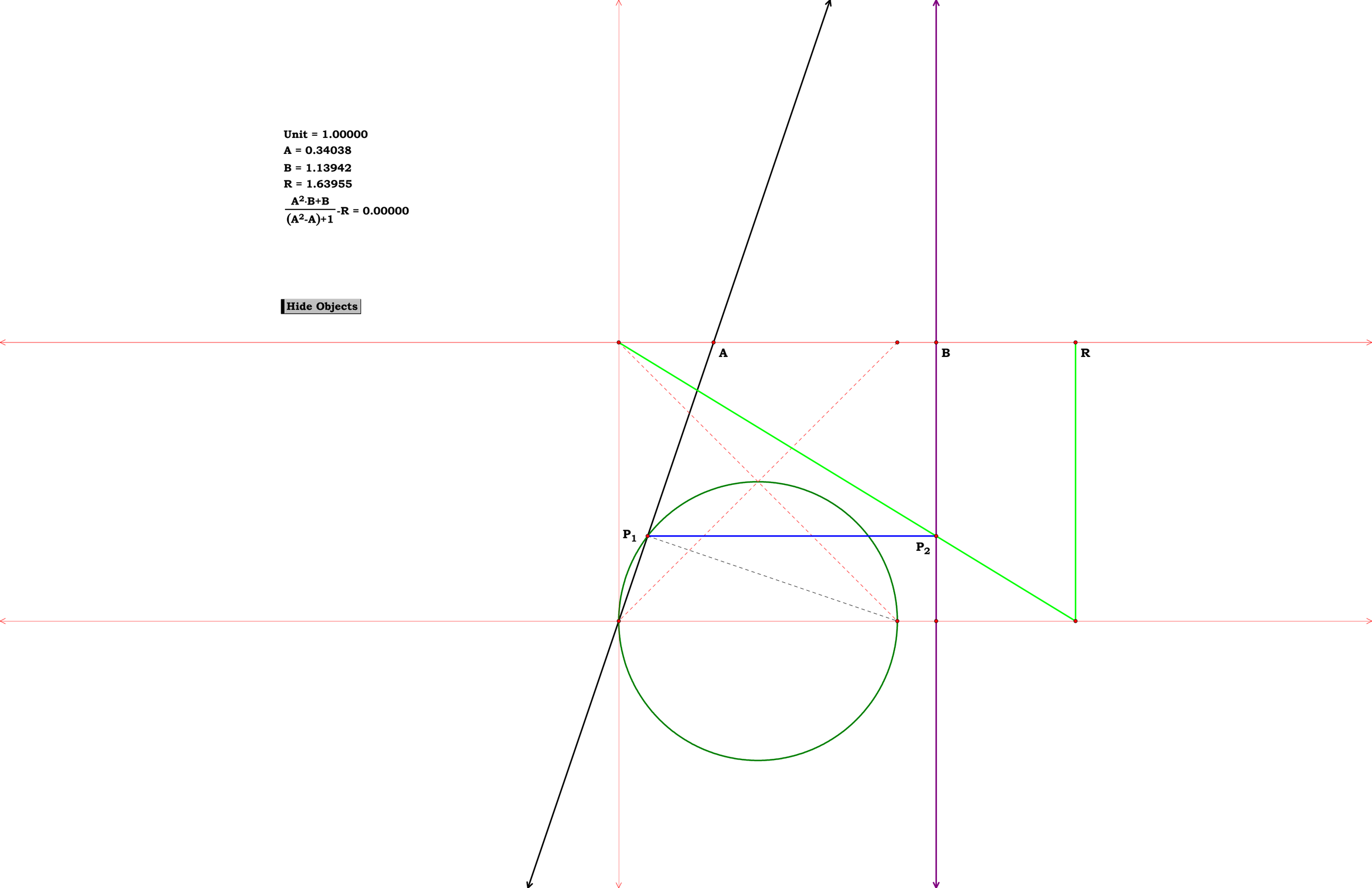
A = 0.34038

B = 1.13942

R = 1.63955

$\frac{A^2 \cdot B+B}{(A^2-A)+1}$-R = 0.00000

Hide Objects



Unit = 1.00000

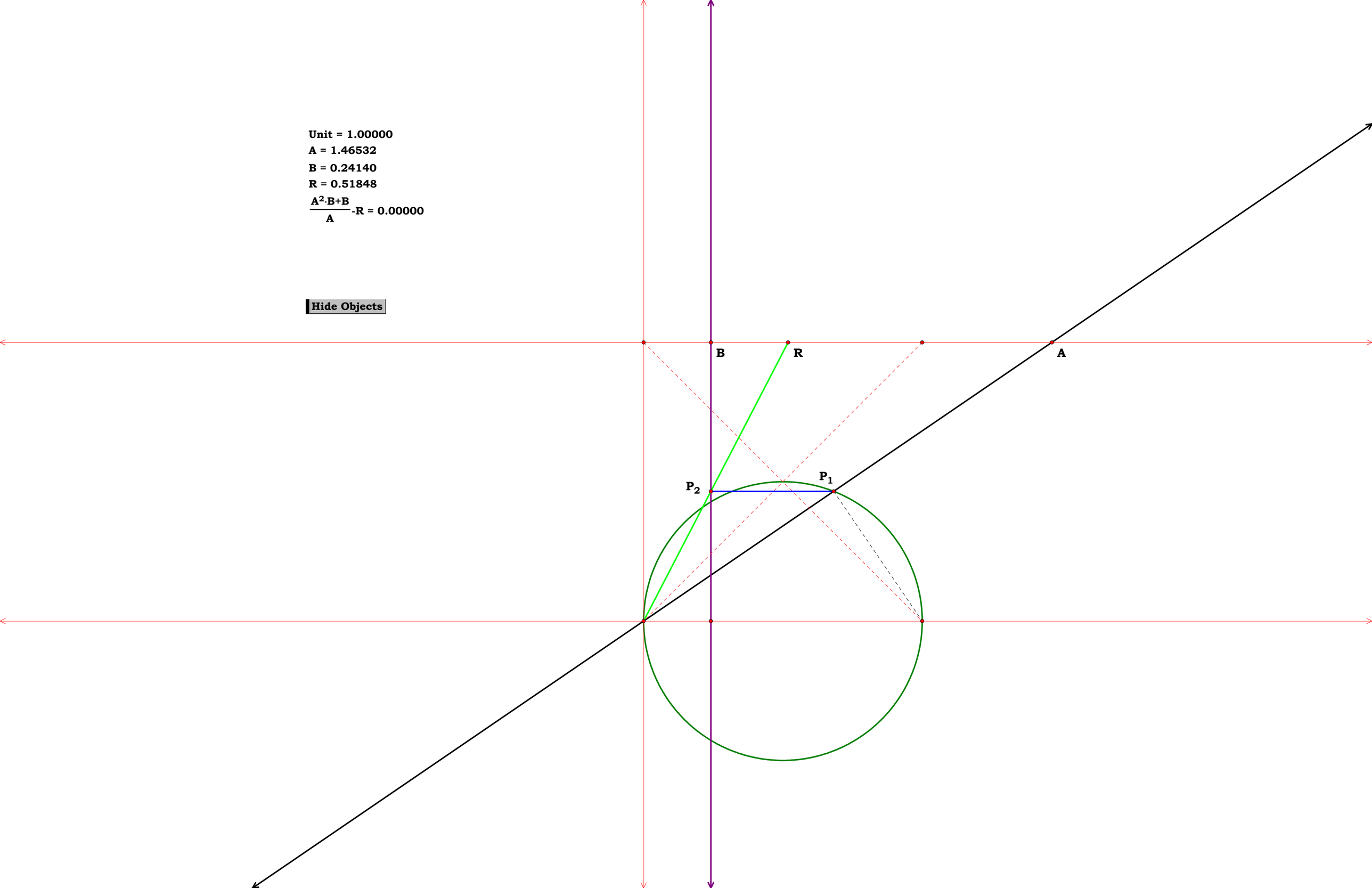
A = 1.46532

B = 0.24140

R = 0.51848

$\frac{A^2 \cdot B+B}{A}$ -R = 0.00000

Hide Objects



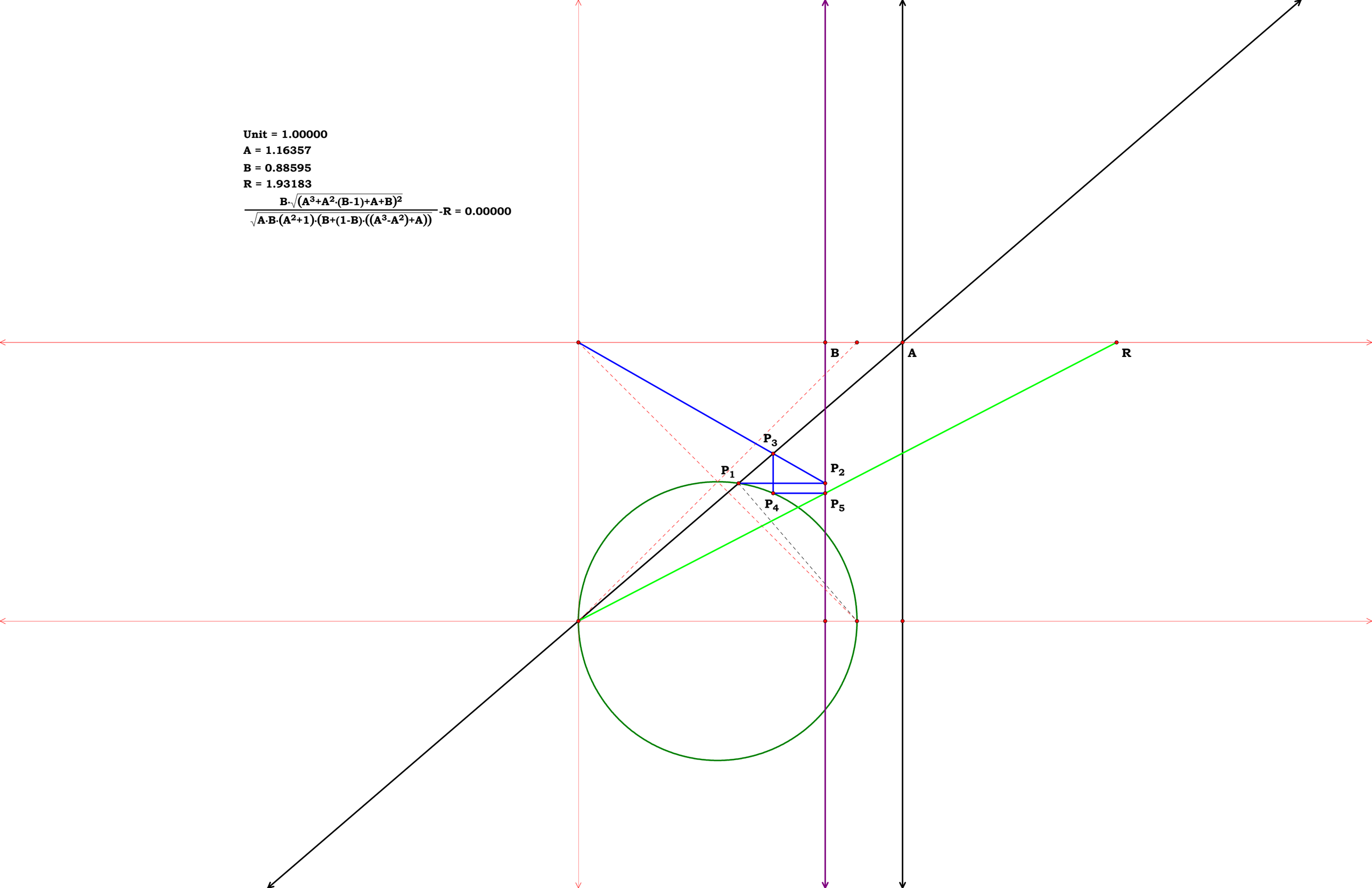
Unit = 1.00000

A = 1.16357

B = 0.88595

R = 1.93183

$$\frac{B\cdot\sqrt{(A^3+A^2\cdot(B-1)+A+B)^2}}{\sqrt{A\cdot B\cdot(A^2+1)\cdot(B+(1-B)\cdot((A^3-A^2)+A))}}-R = 0.00000$$



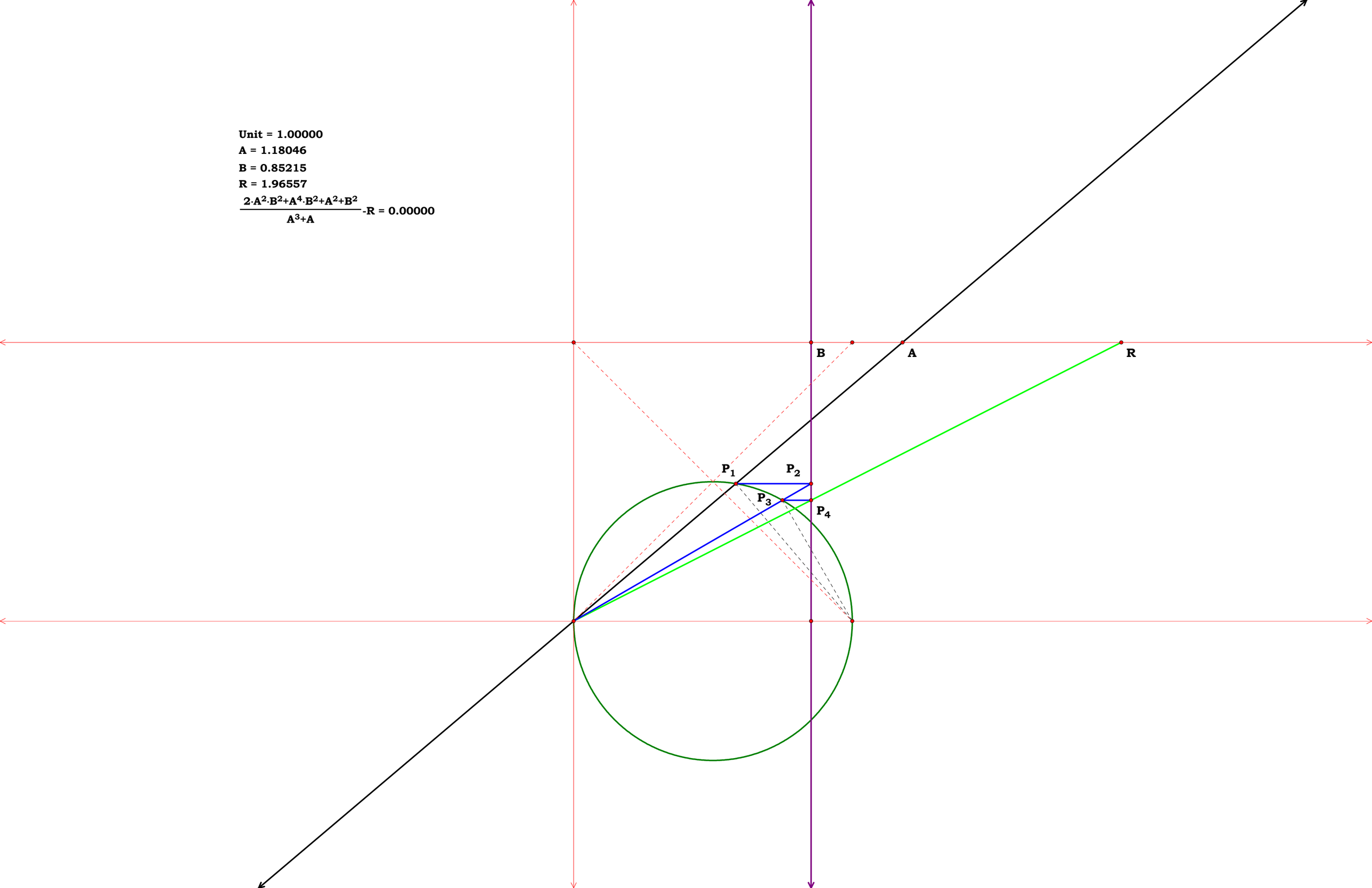
Unit = 1.00000

A = 1.18046

B = 0.85215

R = 1.96557

$$\frac{2\cdot A^2\cdot B^2+A^4\cdot B^2+A^2+B^2}{A^3+A}-R = 0.00000$$



Unit = 1.00000

A = 2.60233

B = 0.63248

R = 0.36304

$$\frac{(A^2 \cdot B - A \cdot B) + B}{(A^2 - A) + 1 + \sqrt{B \cdot ((A^2 - A) + 1) \cdot ((((A^2 - A^2 \cdot B) + A \cdot B) - B) + 1)}} - R = 0.00000$$

R

B

A

P_3

P_2

P_1

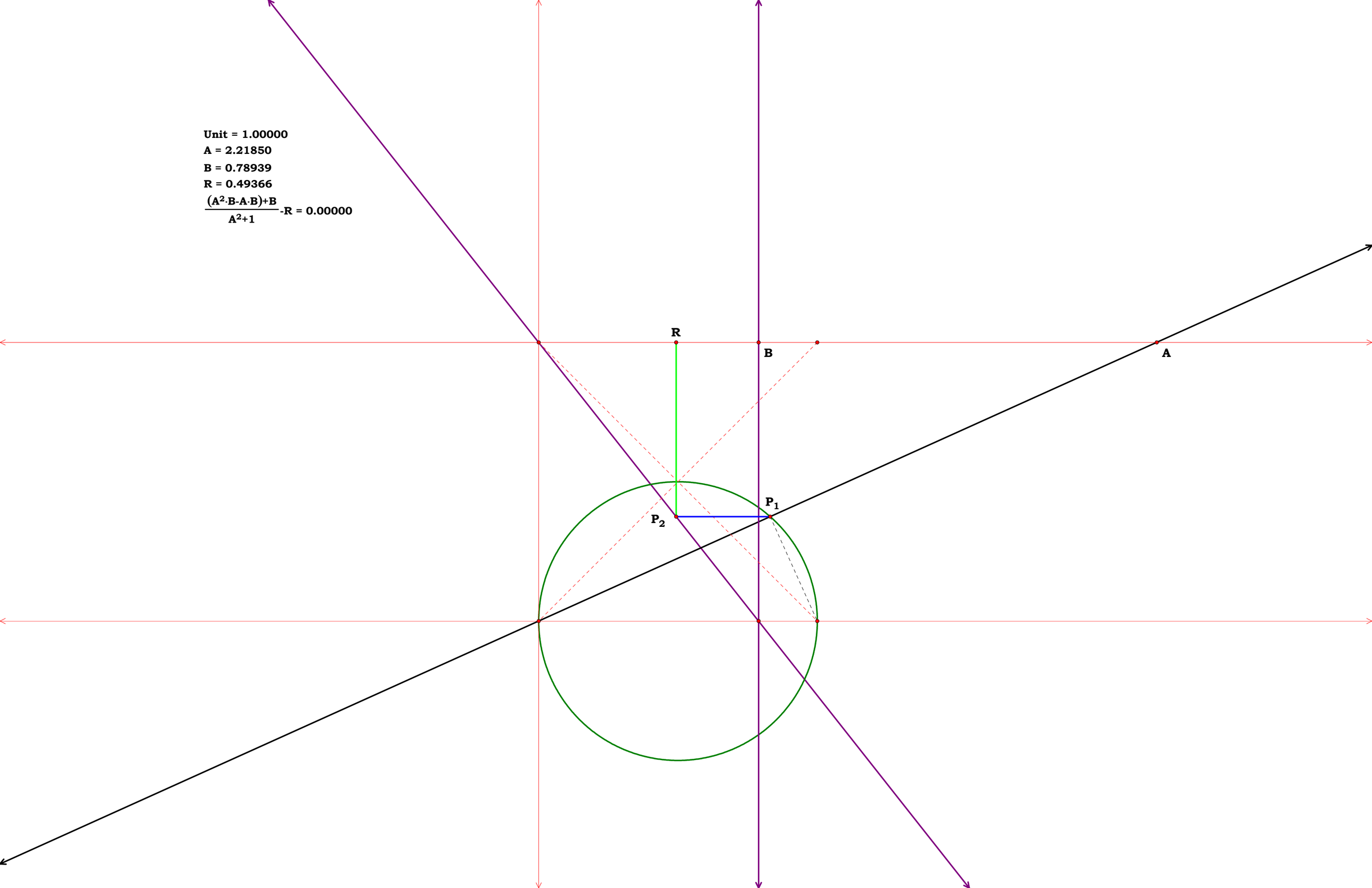
Unit = 1.00000

A = 2.21850

B = 0.78939

R = 0.49366

$$\frac{(A^2 \cdot B - A \cdot B) + B}{A^2 + 1} - R = 0.00000$$



Unit = 1.00000

A = 2.14608

B = 1.74052

R = 0.88729

$$\frac{(((A^4\cdot B^2-2\cdot A^3\cdot B^2)+3\cdot A^2\cdot B^2)-2\cdot A\cdot B^2)+B^2}{(((A^4\cdot B^2-2\cdot A^3\cdot B^2)+3\cdot A^2\cdot B^2)-2\cdot A\cdot B^2)+A^2+B^2}-R = 0.00000$$

R

B

A

P_1

P_2

P_3

Unit = 1.00000

A = 2.04227

B = 1.08390

R = 1.24317

$$\frac{((A^2\cdot B-A\cdot B)+B)}{\sqrt{(((((A^2-A^2\cdot B)+A\cdot B)-A-B)+1)+\sqrt{(A\cdot B-A^2\cdot B-B)\cdot(((A^2\cdot B-A\cdot B-A^2)+B)-1)})\cdot((A^2\cdot B-A\cdot B)+B)}}-R = 0.00000$$

B

R

A

P_5

P_3

P_4

P_1

P_2

Unit = 1.00000

A = 2.15332

B = 0.70973

R = 0.88389

$$\frac{(A^2 \cdot B - A \cdot B) + B}{\sqrt{(A \cdot B - A^2 \cdot B - B) \cdot (((A^2 \cdot B - A \cdot B - A^2) + B) - 1)}} - R = 0.00000$$

B

R

A

P_3

P_2

P_1

Unit = 1.00000

A = 1.65603

B = 0.86422

R = 1.14635

$$\frac{\sqrt{(A\cdot B)^2}}{\sqrt{(A^2\cdot B+A\cdot B^2)-A^2\cdot B^2}}-R = 0.00000$$

B

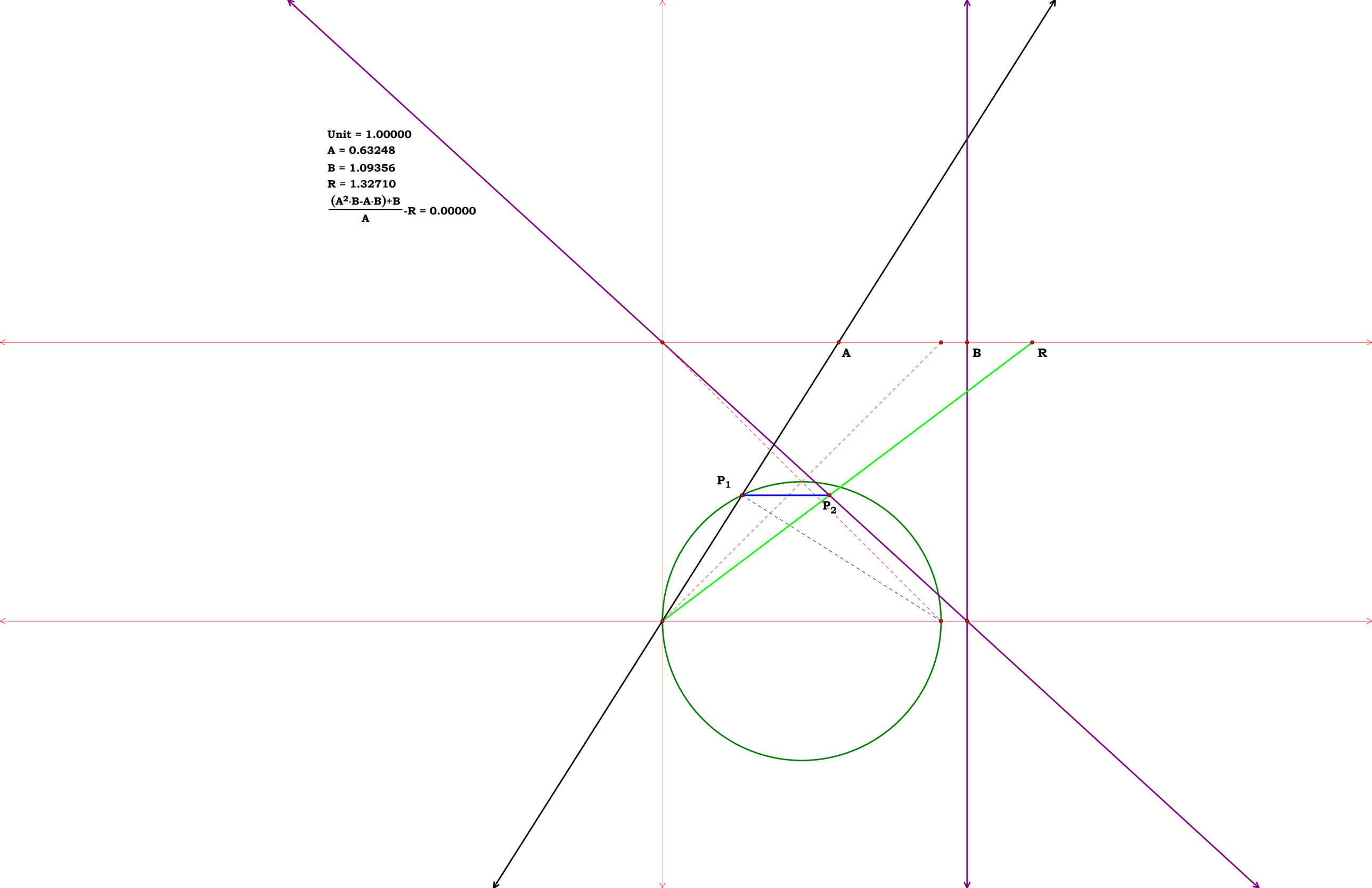
R

A

P_3

P_1

P_2


Unit = 1.00000
A = 0.63248
B = 1.09356
R = 1.32710
$\frac{(A^2 \cdot B - A \cdot B) + B}{A} - R = 0.00000$
A
B
R
P_1
P_2

Unit = 1.00000

A = 1.09356

B = 0.87629

R = 1.63710

$$\frac{(A+B)\cdot\left(\sqrt{(A+B)^2}+\sqrt{(A-B)\cdot(A+3\cdot B)}\right)}{2\cdot B\cdot\sqrt{(A+B)^2}}-R = 0.00000$$

B

A

R

P_3

P_1

Unit = 1.00000
A = 1.57878
B = 1.05493
R = 2.48989

$$\left(\frac{\frac{1}{2}+\frac{1}{2}\cdot\sqrt{1-4\cdot\left(\frac{B^2}{\left(\left(\frac{\frac{1}{2}+\frac{1}{2}\cdot\sqrt{1-4\cdot\left(\frac{B^2}{(A+B)^2}\right)}}{B}\right)\cdot(A+B)+B\right)^2}\right)}}{B}\right)\cdot\left(\left(\frac{\frac{1}{2}+\frac{1}{2}\cdot\sqrt{1-4\cdot\left(\frac{B^2}{(A+B)^2}\right)}}{B}\right)\cdot(A+B)+B\right)-R = 0.00000$$

B A R

P_1 P_2 P_3 P_1

Unit = 1.00000

A = 1.47739

B = 0.75318

R = 0.38867

$$\frac{(A+B)\cdot\left(\sqrt{(A+B)^2}-\sqrt{(A-B)\cdot(A+3\cdot B)}\right)}{2\cdot B\cdot\sqrt{(A+B)^2}}-R = 0.00000$$

R

B

A

P_2

P_1

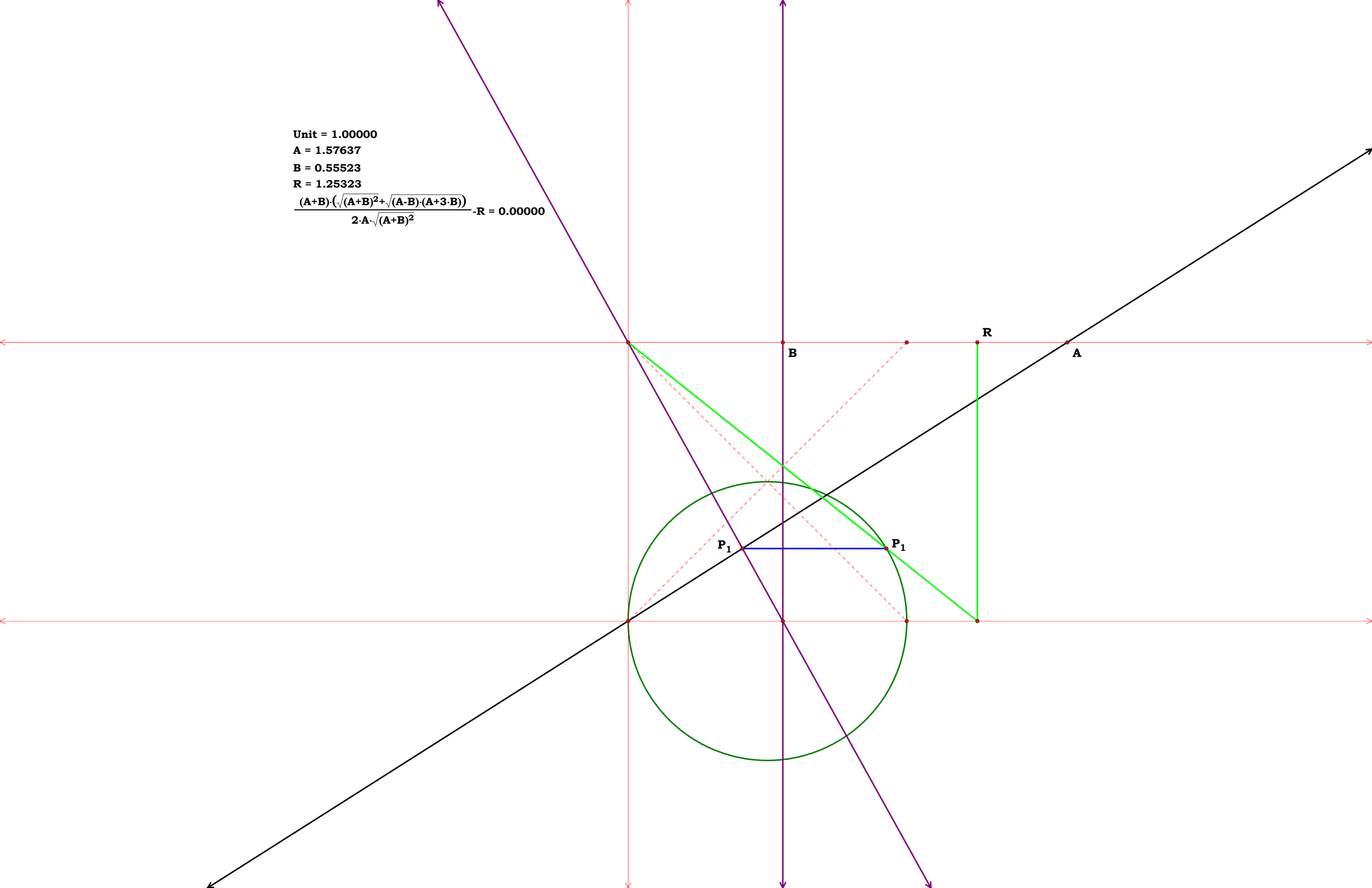
Unit = 1.00000

A = 1.57637

B = 0.55523

R = 1.25323

$$\frac{(A+B)\cdot\left(\sqrt{(A+B)^2}+\sqrt{(A-B)\cdot(A+3\cdot B)}\right)}{2\cdot A\cdot\sqrt{(A+B)^2}}-R = 0.00000$$



Unit = 1.00000

A = 1.83950

B = 0.74111

R = 0.12724

$$\frac{(A+B)\cdot\left(\sqrt{(A+B)^2}-\sqrt{(A-B)\cdot(A+3\cdot B)}\right)}{2\cdot A\cdot\sqrt{(A+B)^2}}-R = 0.00000$$

R

B

A

Unit = 1.00000

A = 1.25771

B = 1.76949

R = 0.93717

$$\frac{A^2 \cdot B}{(A^2 \cdot B - A^2) + B} - R = 0.00000$$

R

A

B

P_2

P_1

Unit = 1.00000

A = 1.62465

B = 1.13701

R = 2.33252

$$\frac{A^2 \cdot B + B + \sqrt{((3 \cdot A^2 \cdot B - 2 \cdot A^2) + 3 \cdot B) \cdot (2 \cdot A^2 - A^2 \cdot B - B)}}{2 \cdot ((A^2 \cdot B - A^2) + B)} - R = 0.00000$$

B

A

R

P_1

P_2

P_3

Unit = 1.00000

A = 1.52808

B = 0.90526

C = 0.54557

R = 1.86234

$$\frac{A^2 \cdot C}{(A^2 \cdot B + B) - A^2} - R = 0.00000$$

C

B

A

R

P_1

P_2

P_3

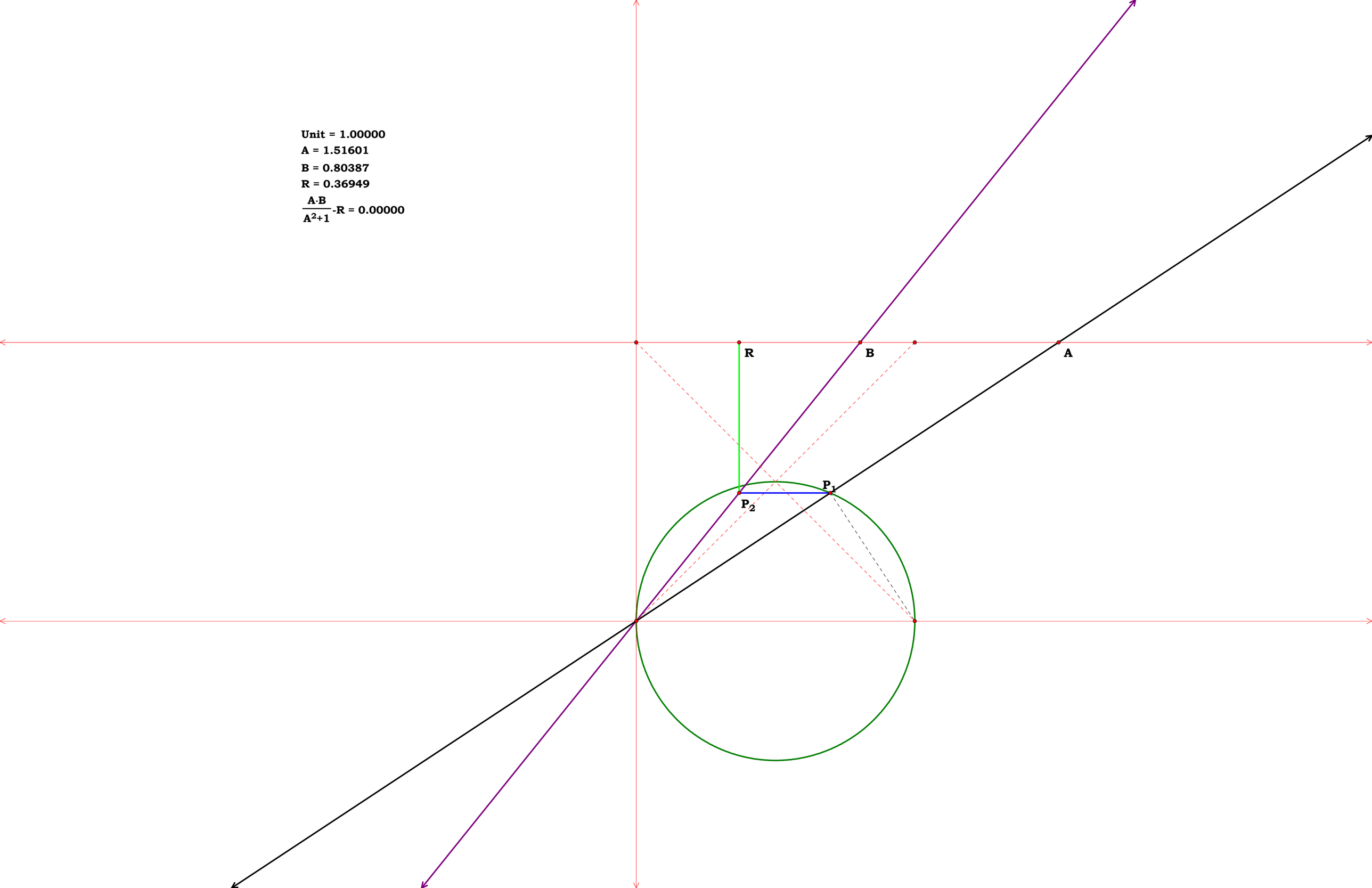
Unit = 1.00000

A = 1.51601

B = 0.80387

R = 0.36949

$\frac{A \cdot B}{A^2+1}$-R = 0.00000



Unit = 1.00000

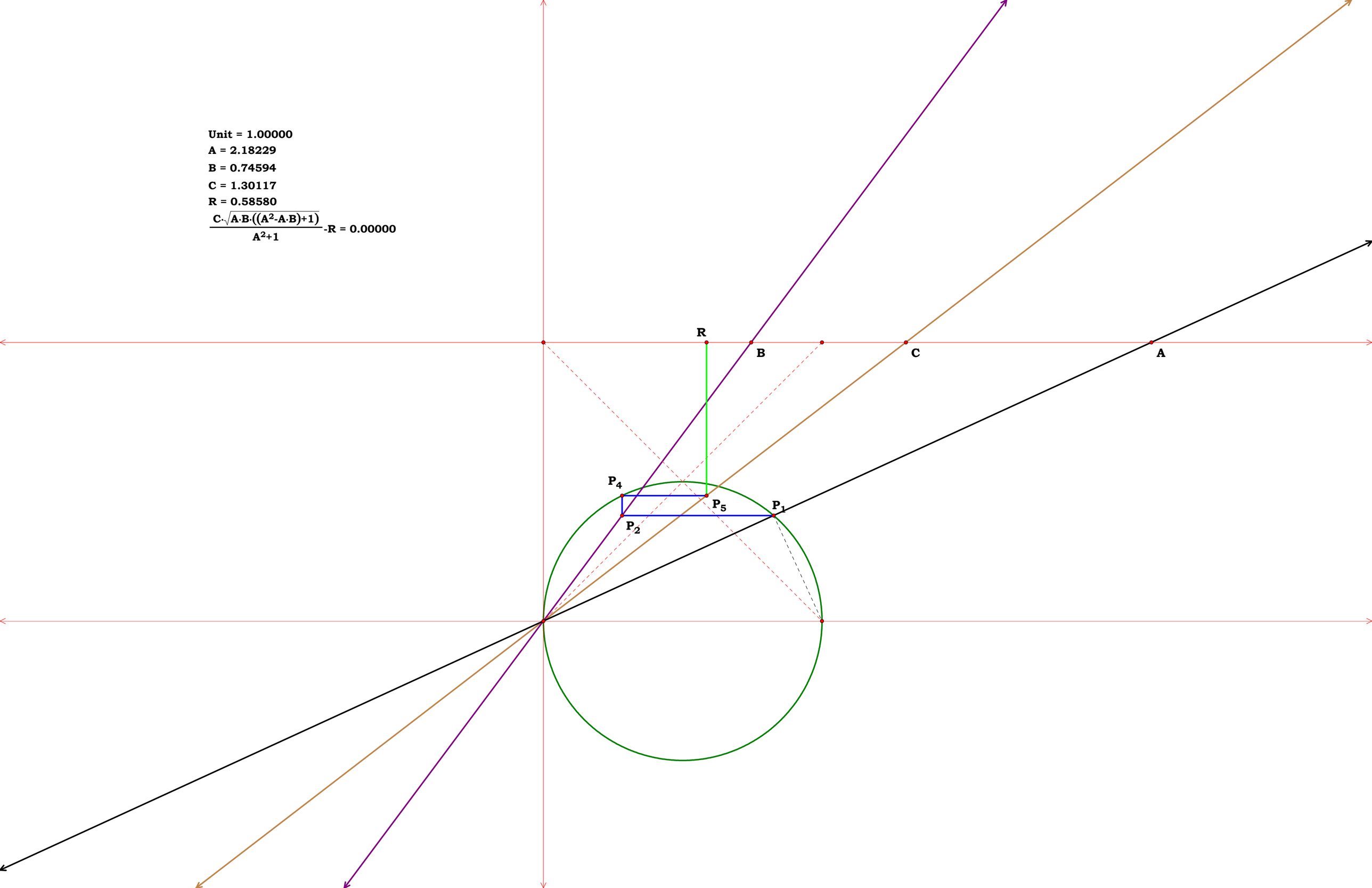
A = 2.18229

B = 0.74594

C = 1.30117

R = 0.58580

$$\frac{C\cdot\sqrt{A\cdot B\cdot((A^2-A\cdot B)+1)}}{A^2+1}-R = 0.00000$$



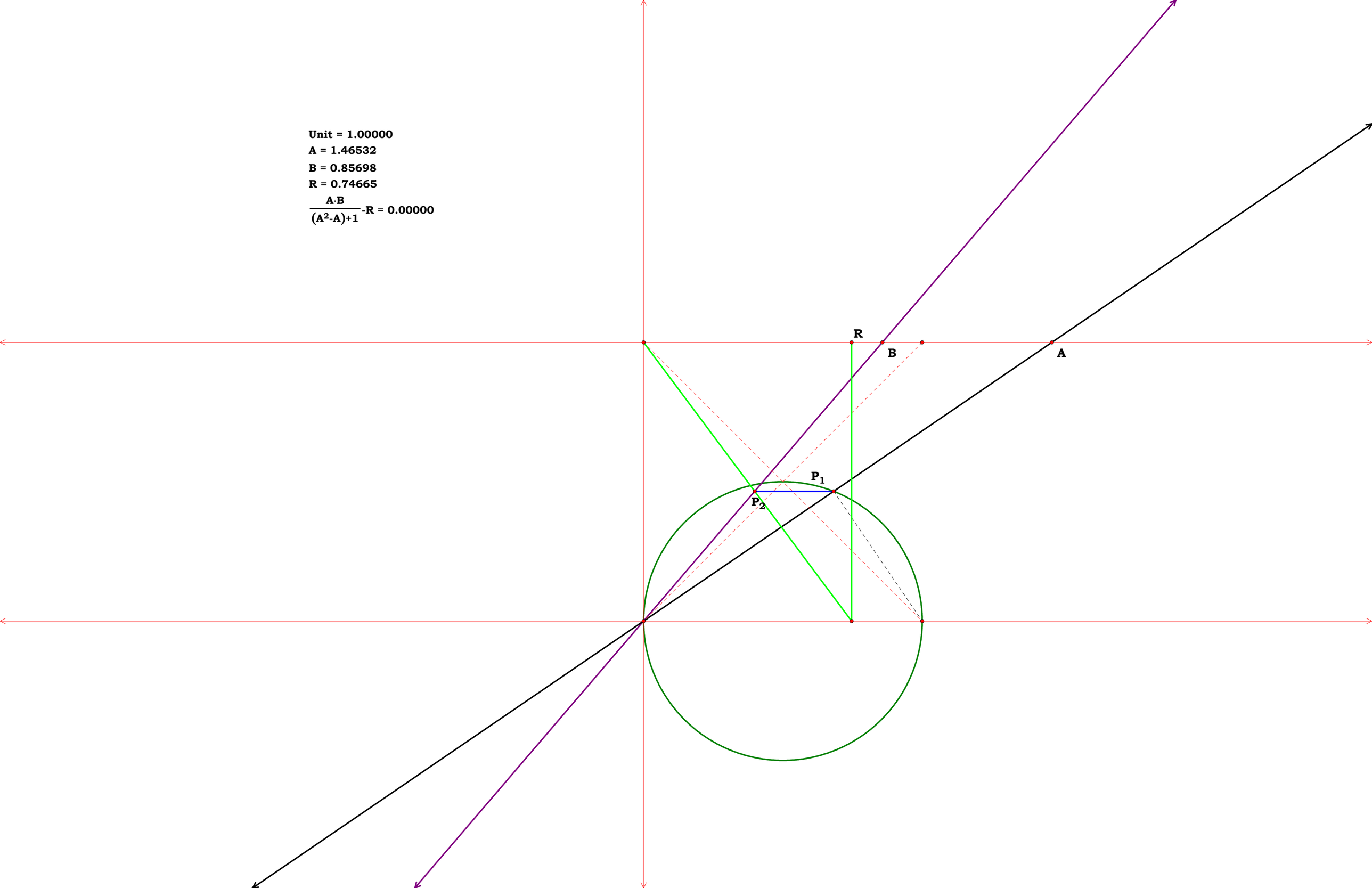
Unit = 1.00000

A = 1.46532

B = 0.85698

R = 0.74665

$\frac{A \cdot B}{(A^2-A)+1}$-R = 0.00000



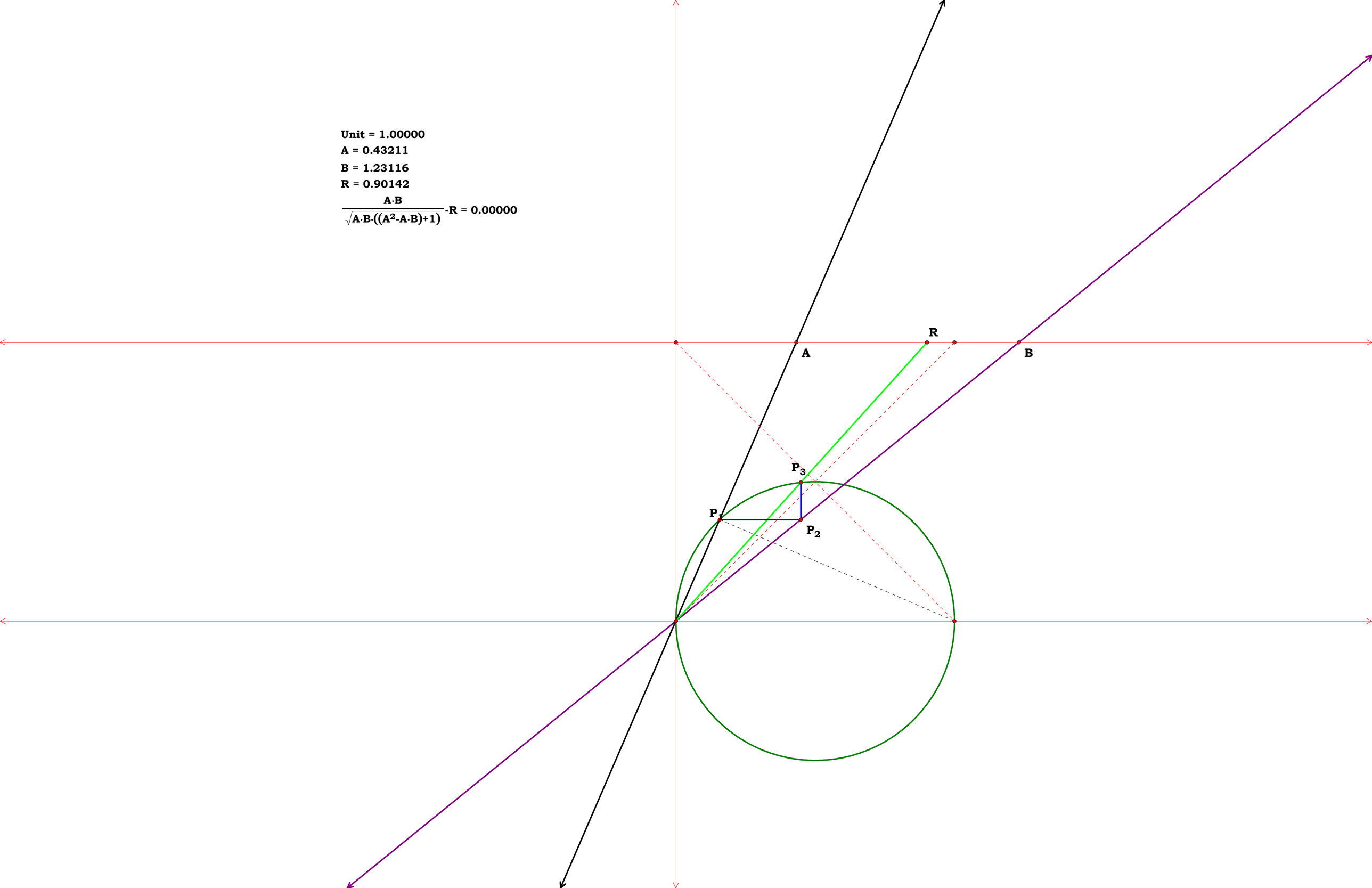
Unit = 1.00000

A = 0.43211

B = 1.23116

R = 0.90142

$$\frac{A \cdot B}{\sqrt{A \cdot B \cdot ((A^2 - A \cdot B) + 1)}} - R = 0.00000$$



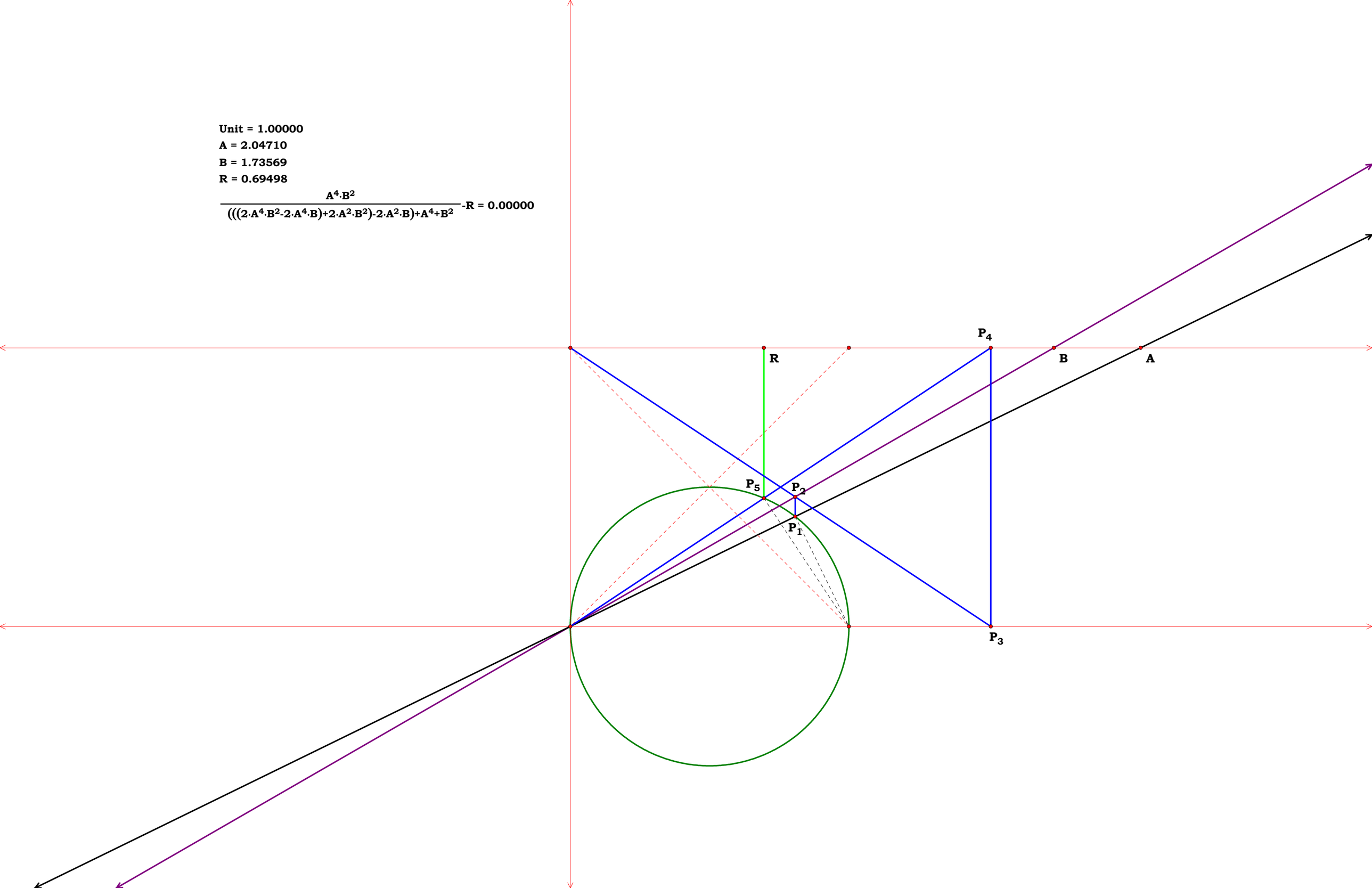
Unit = 1.00000

A = 2.04710

B = 1.73569

R = 0.69498

$$\frac{A^4 \cdot B^2}{(((2 \cdot A^4 \cdot B^2 - 2 \cdot A^4 \cdot B) + 2 \cdot A^2 \cdot B^2) - 2 \cdot A^2 \cdot B) + A^4 + B^2} - R = 0.00000$$



Unit = 1.00000

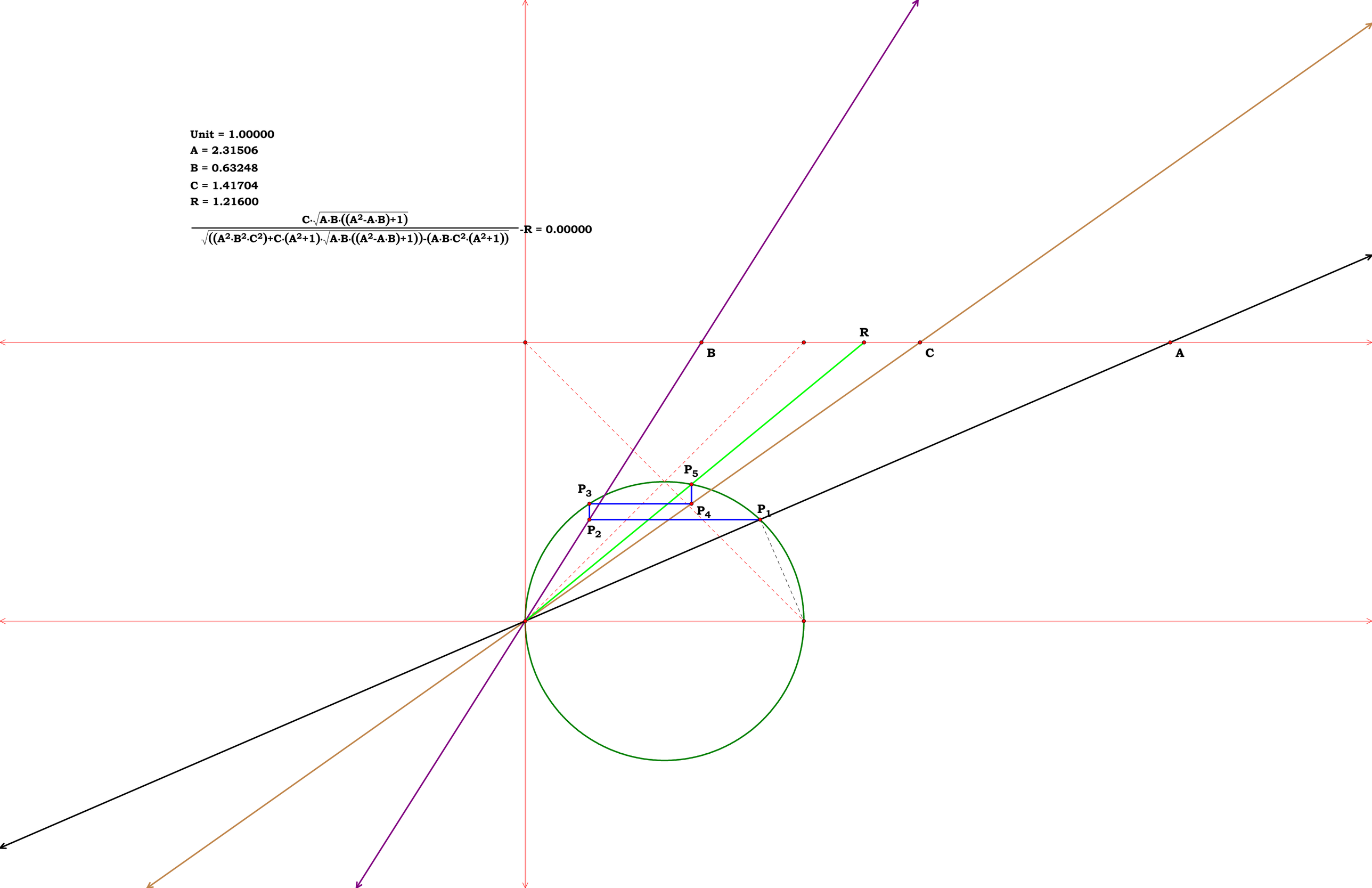
A = 2.31506

B = 0.63248

C = 1.41704

R = 1.21600

$$\frac{C\cdot\sqrt{A\cdot B\cdot((A^2-A\cdot B)+1)}}{\sqrt{((A^2\cdot B^2\cdot C^2)+C\cdot(A^2+1)\cdot\sqrt{A\cdot B\cdot((A^2-A\cdot B)+1)})-(A\cdot B\cdot C^2\cdot(A^2+1))}}-R = 0.00000$$



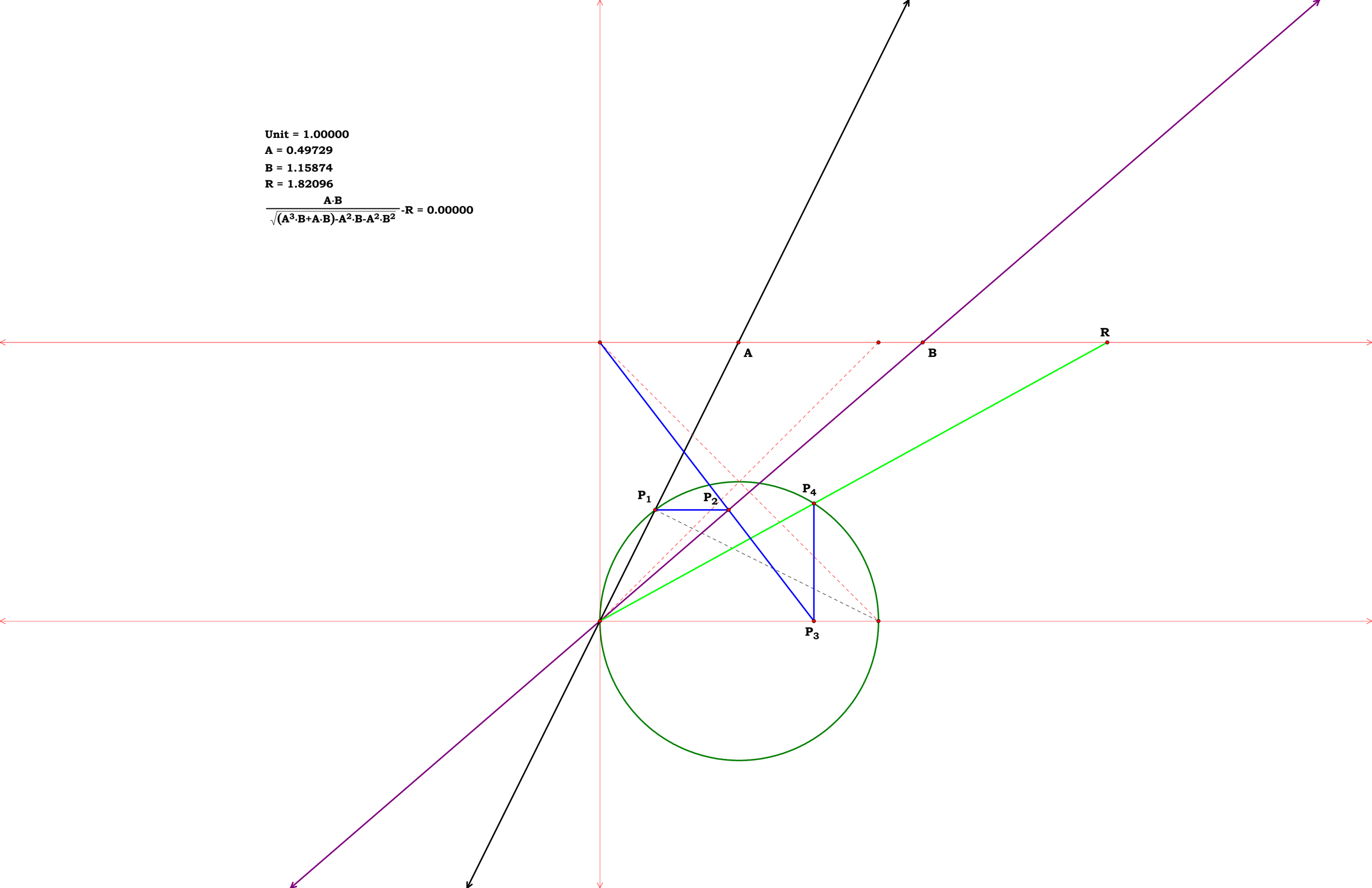
Unit = 1.00000

A = 0.49729

B = 1.15874

R = 1.82096

$$\frac{A \cdot B}{\sqrt{(A^3 \cdot B + A \cdot B) - A^2 \cdot B - A^2 \cdot B^2}} - R = 0.00000$$



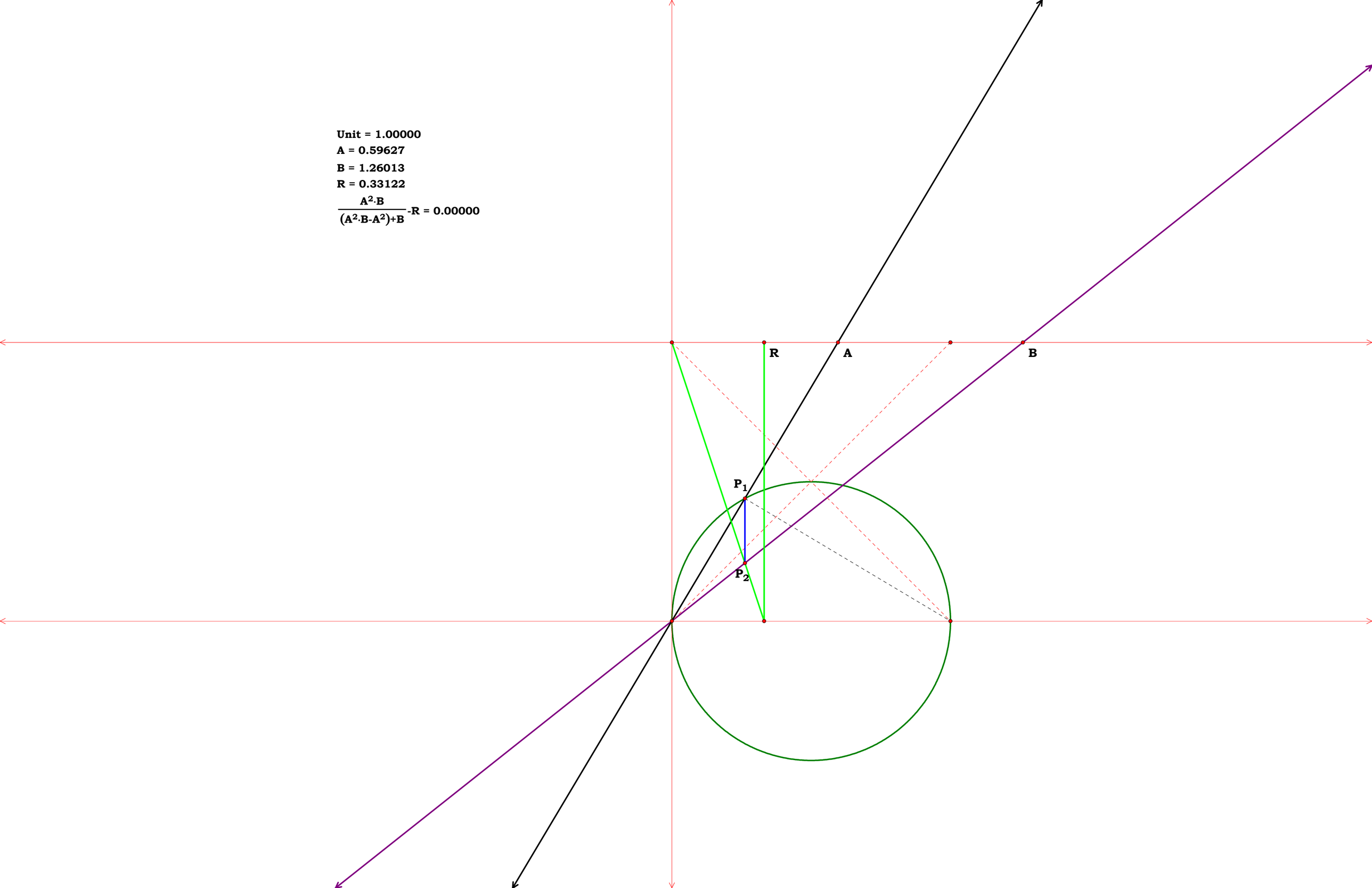
Unit = 1.00000

A = 0.59627

B = 1.26013

R = 0.33122

$$\frac{A^2 \cdot B}{(A^2 \cdot B - A^2) + B} - R = 0.00000$$



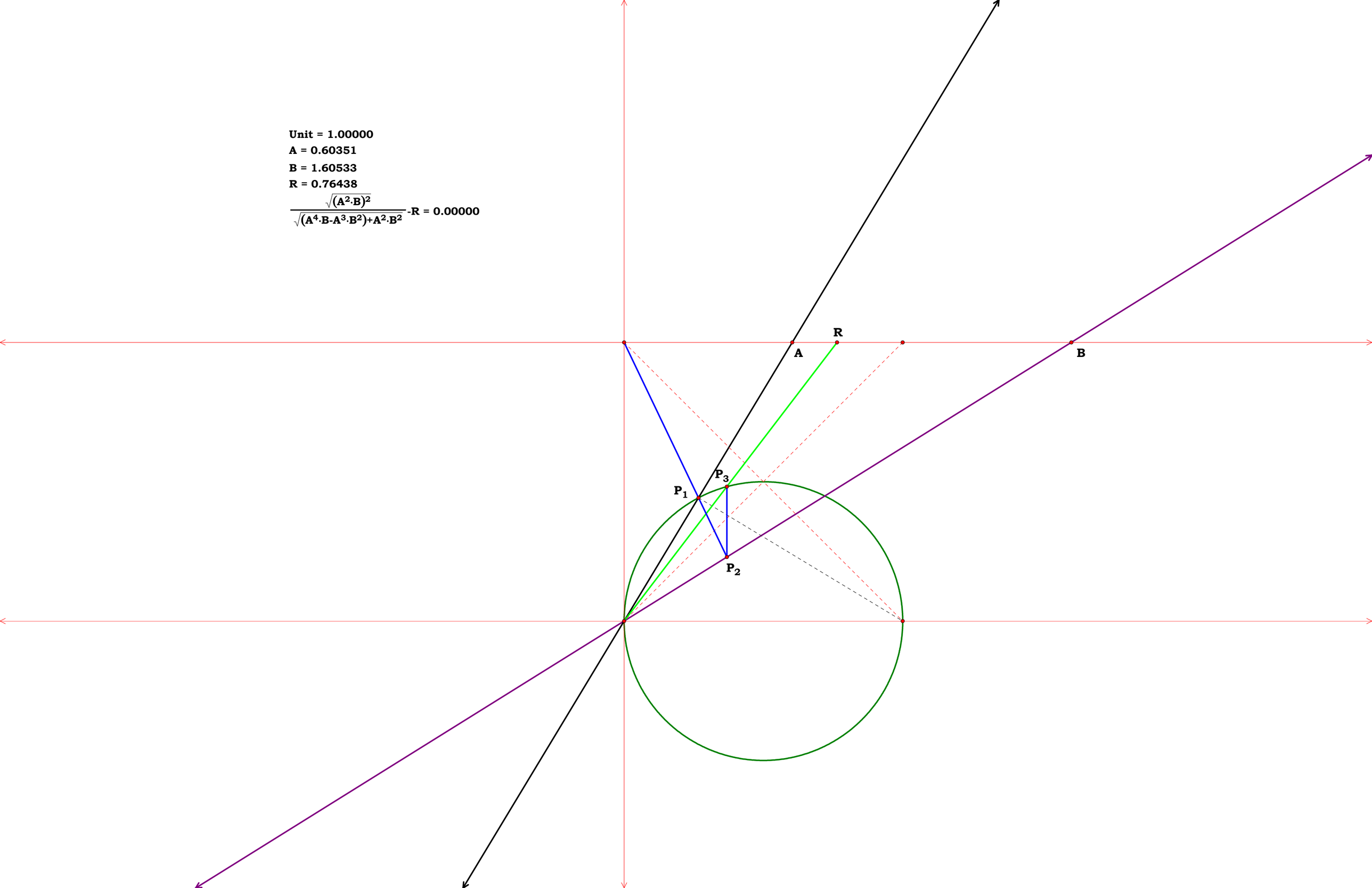
Unit = 1.00000

A = 0.60351

B = 1.60533

R = 0.76438

$$\frac{\sqrt{(A^2 \cdot B)^2}}{\sqrt{(A^4 \cdot B - A^3 \cdot B^2) + A^2 \cdot B^2}} - R = 0.00000$$



Unit = 1.00000

A = 1.54981

B = 2.07124

C = 0.90526

R = 0.45581

$$\frac{(A^2 \cdot B \cdot C - A^2 \cdot B) + B \cdot C}{A^2 \cdot C + C} - R = 0.00000$$

R

C

A

B

P_2

P_3

P_2

Unit = 1.00000

A = 0.55040

B = 0.65179

C = 1.09597

D = 1.79363

R = 0.71951

$$\frac{B\cdot C\cdot D\cdot(A^2+1)-A^2\cdot B\cdot D}{D\cdot(A^2\cdot C+C)-B\cdot((C+A^2\cdot C)-A^2)}-R = 0.00000$$

A B R C D

P_1 P_2 P_3 P_4

Unit = 1.00000

A = 0.38866

B = 0.90285

C = 0.63731

R = 1.59147

$$\frac{\sqrt{C^2}\cdot B\cdot((A^2\cdot C+C)-A^2)}{C\cdot\sqrt{B\cdot((A^2\cdot C+C)-A^2)\cdot((A^2\cdot B+A^2\cdot C+C)-B\cdot C-A^2\cdot B\cdot C)}}-R = 0.00000$$

A

C

B

R

P_1

P_2

P_3

P_4

Unit = 1.00000

A = 1.89260

B = 0.76525

C = 1.09597

R = 0.44421

$$\frac{A \cdot B \cdot C}{(A^2 \cdot C - A \cdot B) + C} - R = 0.00000$$

R

B

C

A

P_3

P_1

P_2

Unit = 1.00000

A = 1.73086

B = 0.82319

C = 1.09597

R = 0.68466

$$\frac{B\cdot C\cdot\sqrt{A\cdot(A+C)^2}}{(A+C)\cdot\sqrt{A^2\cdot B\cdot C\cdot((A+C)-B\cdot C)}}-R = 0.00000$$

R

B

C

A

P_3

P_2

P_1

Unit = 1.00000

A = 0.70973

B = 1.85157

C = 1.09597

R = 0.83062

$$\frac{A^2 \cdot B \cdot C}{(((A^2 \cdot B \cdot C - A \cdot B \cdot C) + A^2 \cdot C) - A^2 \cdot B) + B \cdot C} - R = 0.00000$$

A

R

C

B

P_3

P_1

P_2

Unit = 1.00000

A = 1.49912

B = 0.49246

C = 2.24023

D = 2.05917

R = 1.73189

$$\frac{D\cdot((B\cdot C\cdot((A^2-A)+1)+A^2\cdot C)-A^2\cdot B)}{C\cdot((B+A^2\cdot B+A^2)-A\cdot B)}-R = 0.00000$$

B

A

R

D

C

P_3

P_4

P_2

P_1

Unit = 1.00000

A = 1.46532

B = 0.86664

C = 0.44418

R = 0.32691

$$\frac{(A^2 \cdot B \cdot C - A \cdot B \cdot C) + B \cdot C}{((A^2 \cdot B - A^2 \cdot C) + A \cdot C + B) - C} - R = 0.00000$$

R

C

B

A

P_2

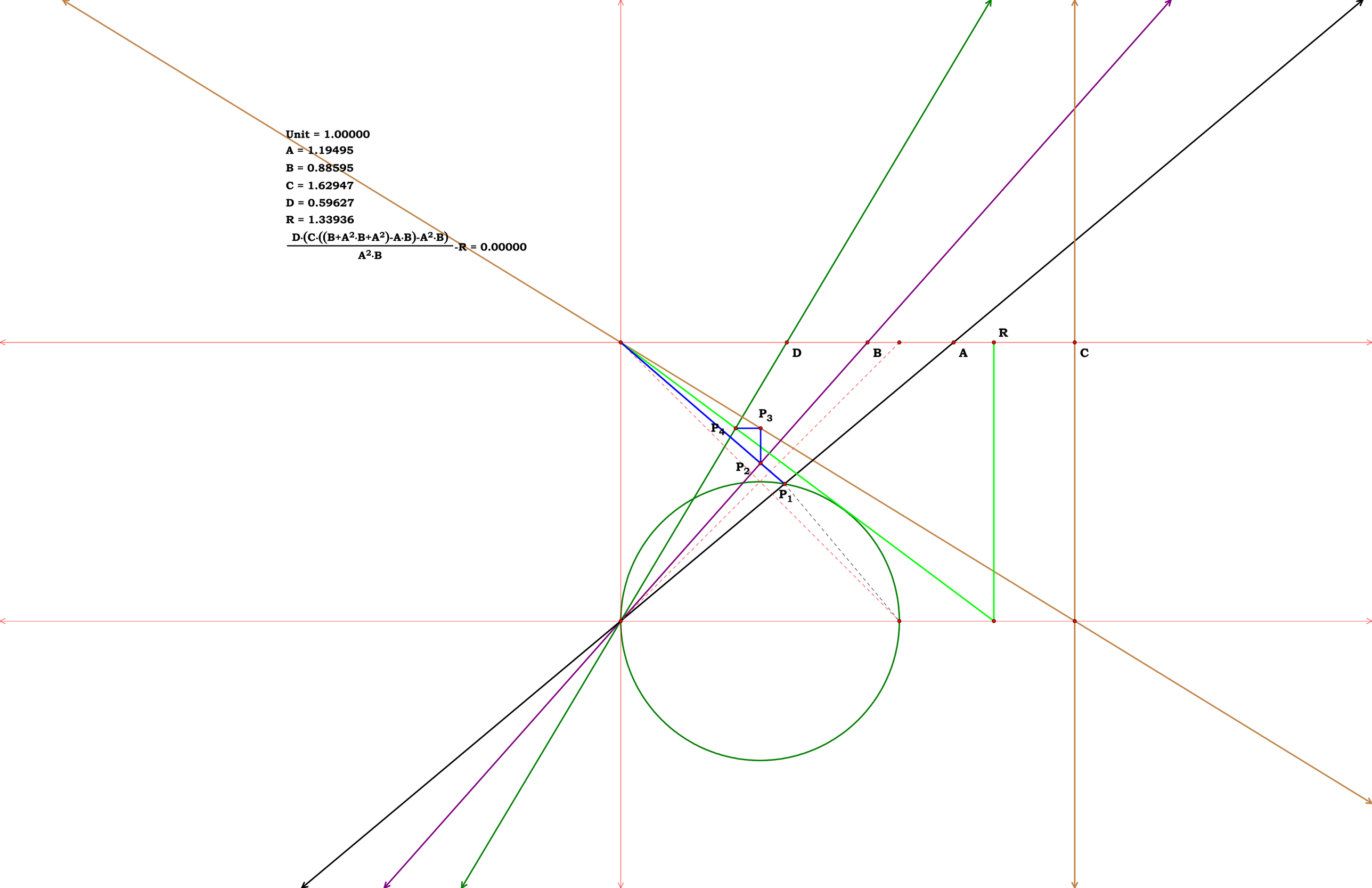
P_1

P_3

Unit = 1.00000
A = 2.35851
B = 0.61558
C = 1.81535
D = 0.84008
E = 1.42670
R = 1.12424

$$\frac{A^2 \cdot C \cdot D \cdot E}{A^2 \cdot ((C \cdot E - C \cdot D) + B \cdot D \cdot E) + B \cdot D \cdot E} - R = 0.00000$$

B
D
R
E
C
A
P_5
P_4
P_3
P_6
P_1
P_2


Unit = 1.00000
A = 1.19495
B = 0.88595
C = 1.62947
D = 0.59627
R = 1.33936
$\frac{D\cdot(C\cdot((B+A^2\cdot B+A^2)-A\cdot B)-A^2\cdot B)}{A^2\cdot B}$-R = 0.00000
D
B
A
R
C
P3
P4
P2
P1

Unit = 1.00000

A = 1.65120

B = 1.26495

C = 1.00182

R = 0.41949

$$\frac{C\cdot\left(\sqrt{\left(B\cdot\left(\left(A^2-A\right)+1\right)+A^2\right)^2}\cdot\sqrt{C^2}-\sqrt{\left(A^2\cdot\left(2\cdot B-C-B\cdot C\right)+B\cdot C\cdot\left(A-1\right)\right)\cdot\left(\left(3\cdot B\cdot C\cdot\left(\left(A^2-A\right)+1\right)+A^2\cdot 3\cdot C\right)-2\cdot A^2\cdot B\right)}\right)\cdot\left(B\cdot\left(\left(A^2-A\right)+1\right)+A^2\right)}{2\cdot\sqrt{\left(B\cdot\left(\left(A^2-A\right)+1\right)+A^2\right)^2}\cdot\sqrt{C^2}\cdot\left(\left(\left(A^2\cdot C-A^2\cdot B\right)+B\cdot C+A^2\cdot B\cdot C\right)-A\cdot B\cdot C\right)} - R = 0.00000$$

R

C

B

A

P_2

P_1

P_4

P_3

Unit = 1.00000

A = 1.41945

B = 2.17505

C = 0.48522

R = 0.66555

$$\frac{\sqrt{B^2}\cdot C\cdot((A^2-A)+1)}{\sqrt{B\cdot C\cdot((A^2-A)+1)\cdot((A^2\cdot((B-B\cdot C)+1)+A\cdot B\cdot(C-1)+B)-B\cdot C)}}-R = 0.00000$$

C

R

A

B

P_1

P_2

P_3

P_4

Unit = 1.00000

A = 1.46532

B = 1.26013

C = 1.09597

D = 0.88112

R = 0.65846

$$\frac{B\cdot D\cdot\sqrt{(A+C)^2}}{B\cdot\sqrt{(A+C)^2}+D\cdot\sqrt{A\cdot C\cdot((A+C)-A\cdot C)}}-R = 0.00000$$

R D C B A

P_1 P_2 P_3 P_4

Unit = 1.00000

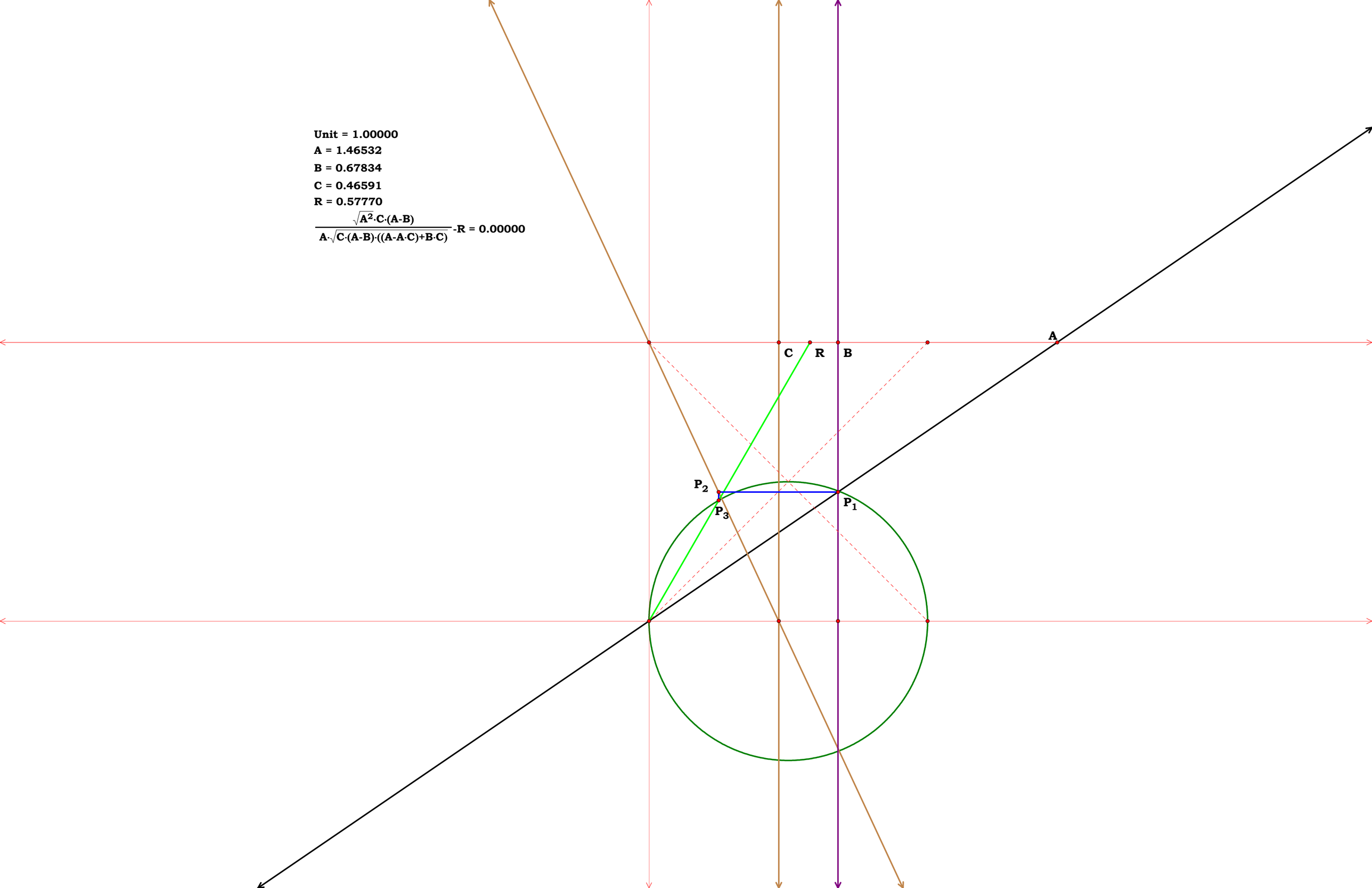
A = 1.46532

B = 0.67834

C = 0.46591

R = 0.57770

$$\frac{\sqrt{A^2 \cdot C \cdot (A-B)}}{A \cdot \sqrt{C \cdot (A-B) \cdot ((A-A \cdot C)+B \cdot C)}} - R = 0.00000$$



Unit = 1.00000

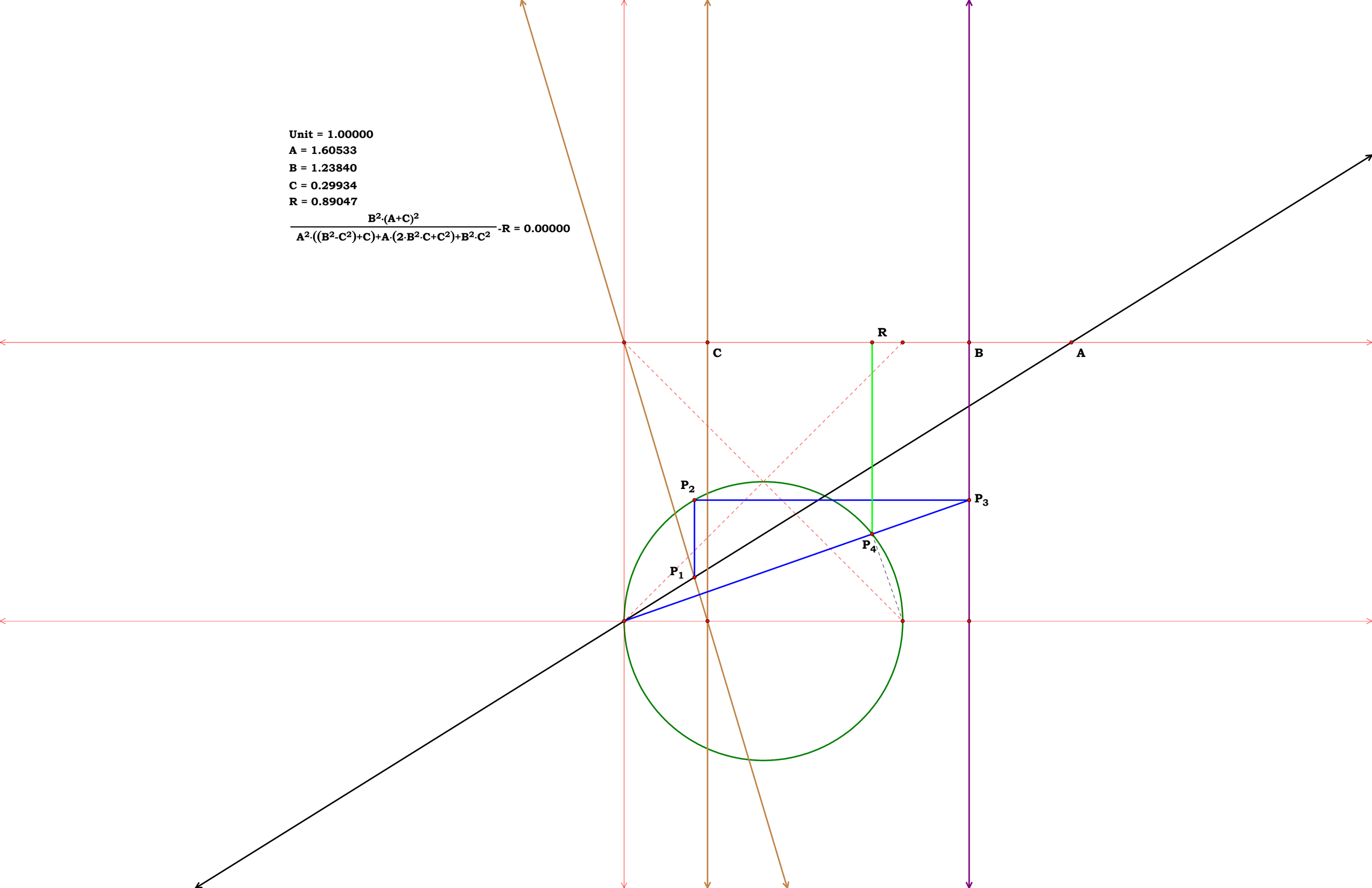
A = 1.60533

B = 1.23840

C = 0.29934

R = 0.89047

$$\frac{B^2\cdot(A+C)^2}{A^2\cdot((B^2-C^2)+C)+A\cdot(2\cdot B^2\cdot C+C^2)+B^2\cdot C^2}-R = 0.00000$$



Unit = 1.00000
A = 0.42246
B = 1.68017
C = 1.74776
D = 0.70490
R = 1.19469

$$\frac{B\cdot\sqrt{D^2}\cdot\sqrt{(A+C)^2}}{\sqrt{B\cdot D\cdot\sqrt{(A+C)^2}\cdot\left(\left(B\cdot\sqrt{(A+C)^2}+D\cdot\sqrt{A\cdot C\cdot((A+C)-A\cdot C)}\right)-B\cdot D\cdot\sqrt{(A+C)^2}\right)}} - R = 0.00000$$

A
D
R
B
C
P_1
P_2
P_3
P_4
P_5

Unit = 1.00000

A = 0.50695

B = 1.12253

C = 1.67775

R = 2.30217

$$\frac{B\cdot\sqrt{(A+C)^2}}{\sqrt{(A^2\cdot C+A\cdot C^2)-A^2\cdot C^2}}-R = 0.00000$$

A

B

C

R

P_1

P_2

P_3

Unit = 1.00000

A = 0.37418

B = 1.05011

C = 0.53109

R = 3.07802

$$\frac{B^2\cdot(A+C)^2+A\cdot C\cdot((A+C)-A\cdot C)}{\sqrt{(A+C)^2}\cdot\sqrt{A\cdot C\cdot((A+C)-A\cdot C)}}-R = 0.00000$$

A

C

B

R

P_1

P_2

P_3

P_4

P_5

Unit = 1.00000

A = 0.32589

B = 0.80629

C = 0.90285

R = 2.49357

$$\frac{B^2\cdot\sqrt{(A+C)^2}+B\cdot C\cdot\sqrt{A\cdot C\cdot((A+C)-A\cdot C)}}{C\cdot\sqrt{A\cdot C\cdot((A+C)-A\cdot C)}}-R = 0.00000$$

A

B

C

R

P_1

P_2

P_3

P_4

P_5

Unit = 1.00000
A = 1.46532
B = 0.45142
C = 1.72121
R = 0.74786
$\frac{A^2 \cdot B \cdot C + B \cdot C}{(A^2 \cdot C - A^2) + C} - R = 0.00000$

B
R
A
C
P_3
P_2
P_1

Unit = 1.00000

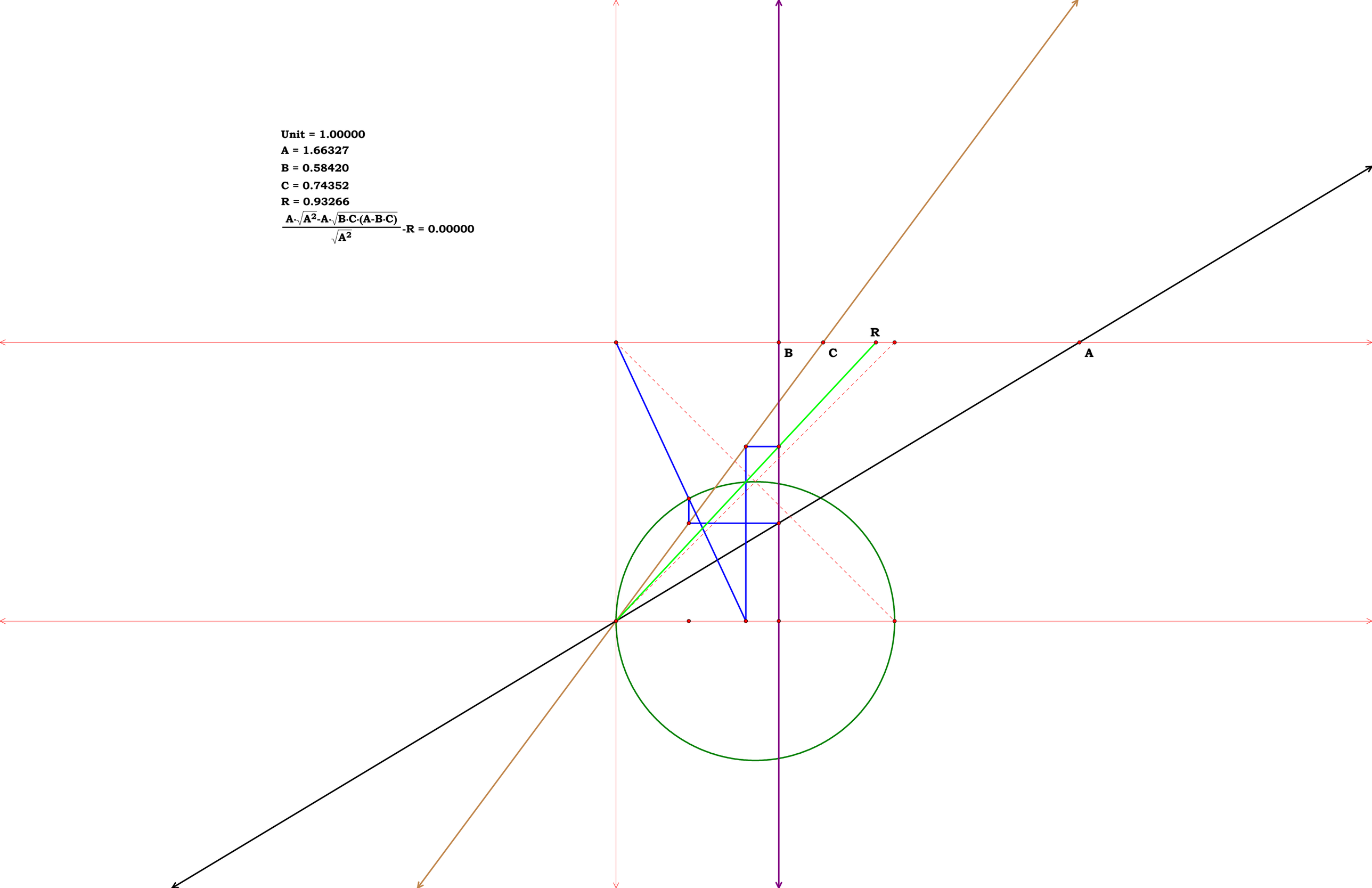
A = 1.66327

B = 0.58420

C = 0.74352

R = 0.93266

$$\frac{A\cdot\sqrt{A^2}-A\cdot\sqrt{B\cdot C\cdot(A-B\cdot C)}}{\sqrt{A^2}}-R = 0.00000$$



Unit = 1.00000

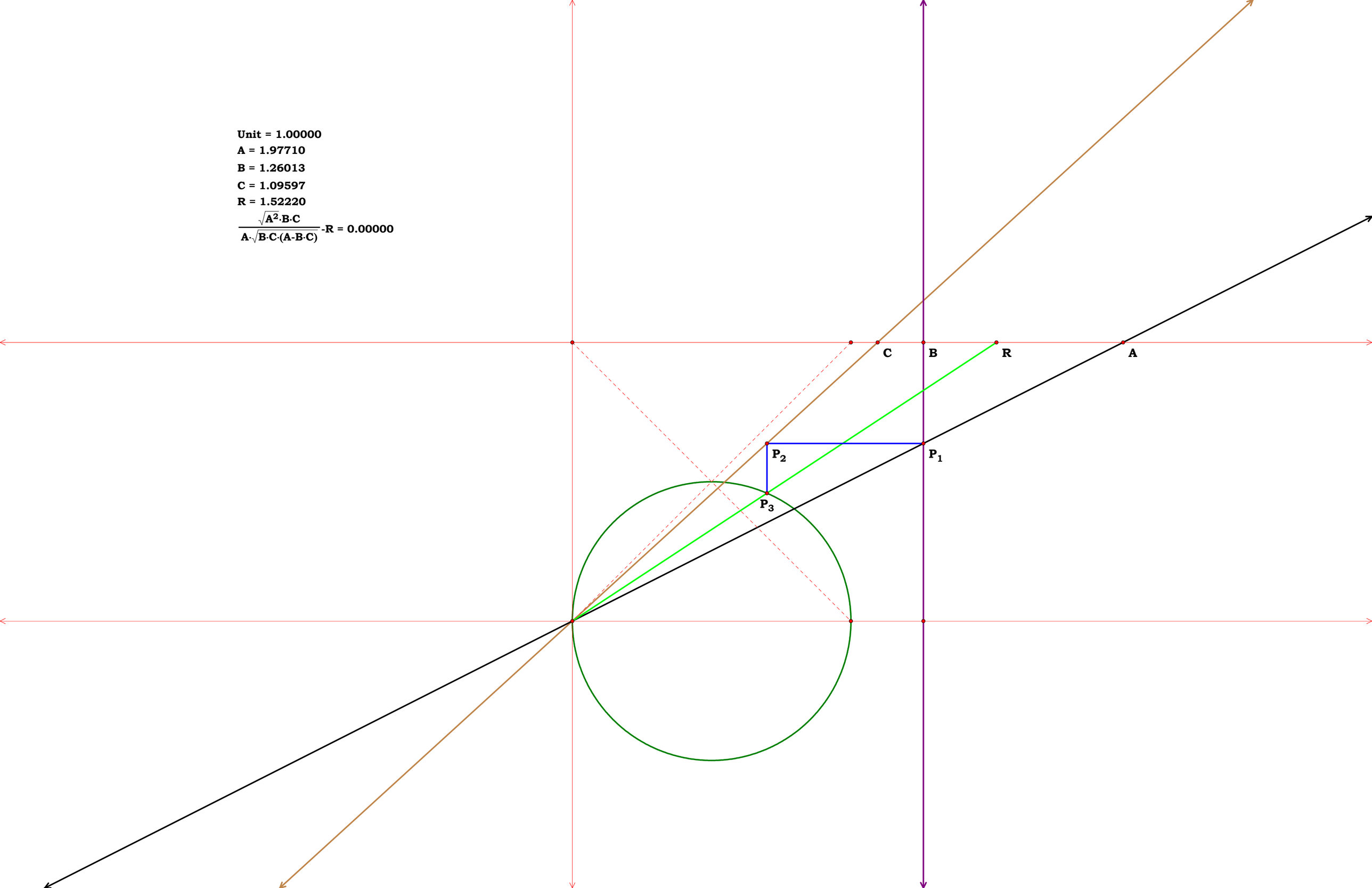
A = 1.97710

B = 1.26013

C = 1.09597

R = 1.52220

$$\frac{\sqrt{A^2 \cdot B \cdot C}}{A \cdot \sqrt{B \cdot C \cdot (A - B \cdot C)}} - R = 0.00000$$



Unit = 1.00000

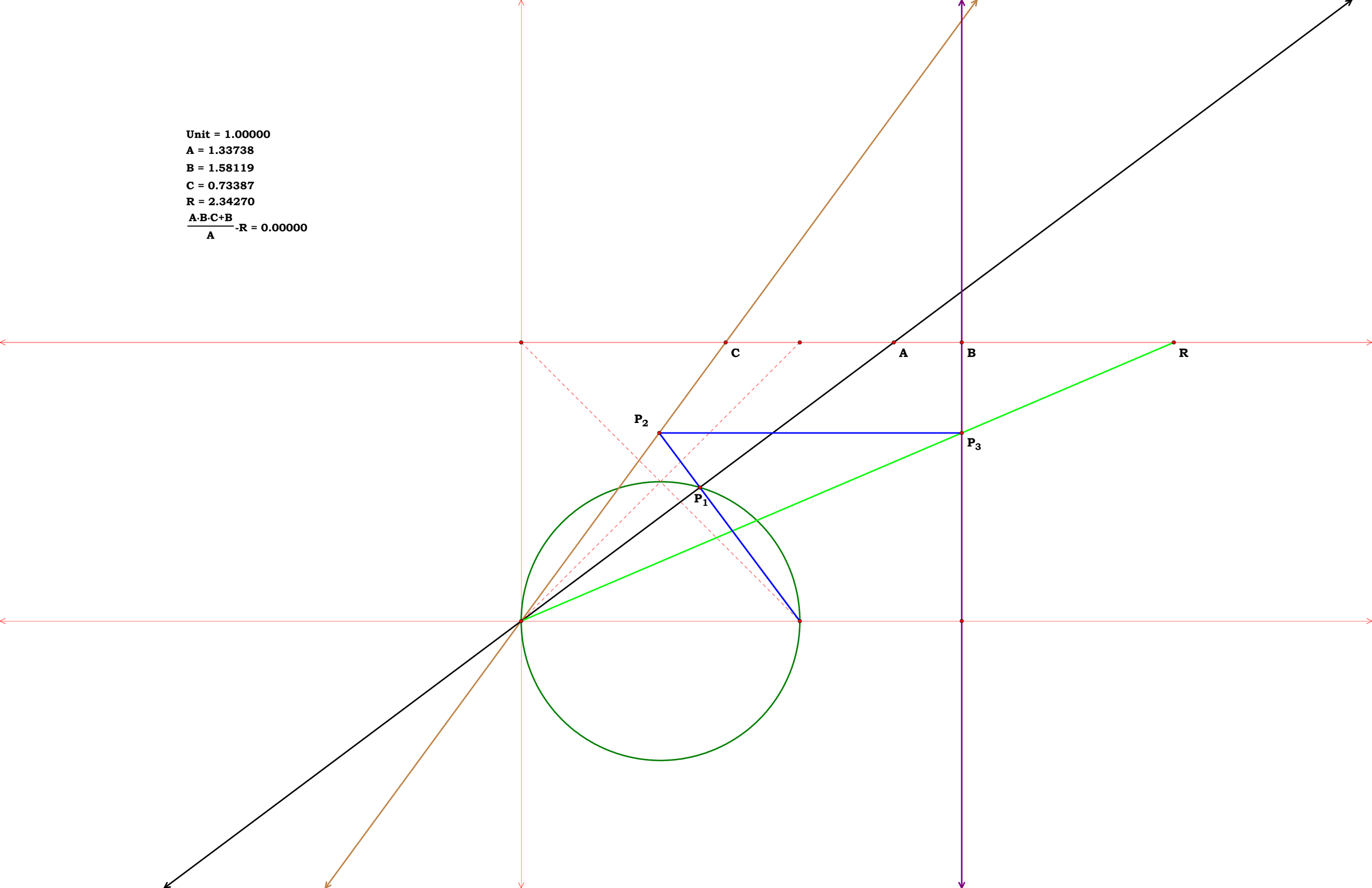
A = 1.33738

B = 1.58119

C = 0.73387

R = 2.34270

$\frac{A \cdot B \cdot C + B}{A} - R = 0.00000$



Unit = 1.00000

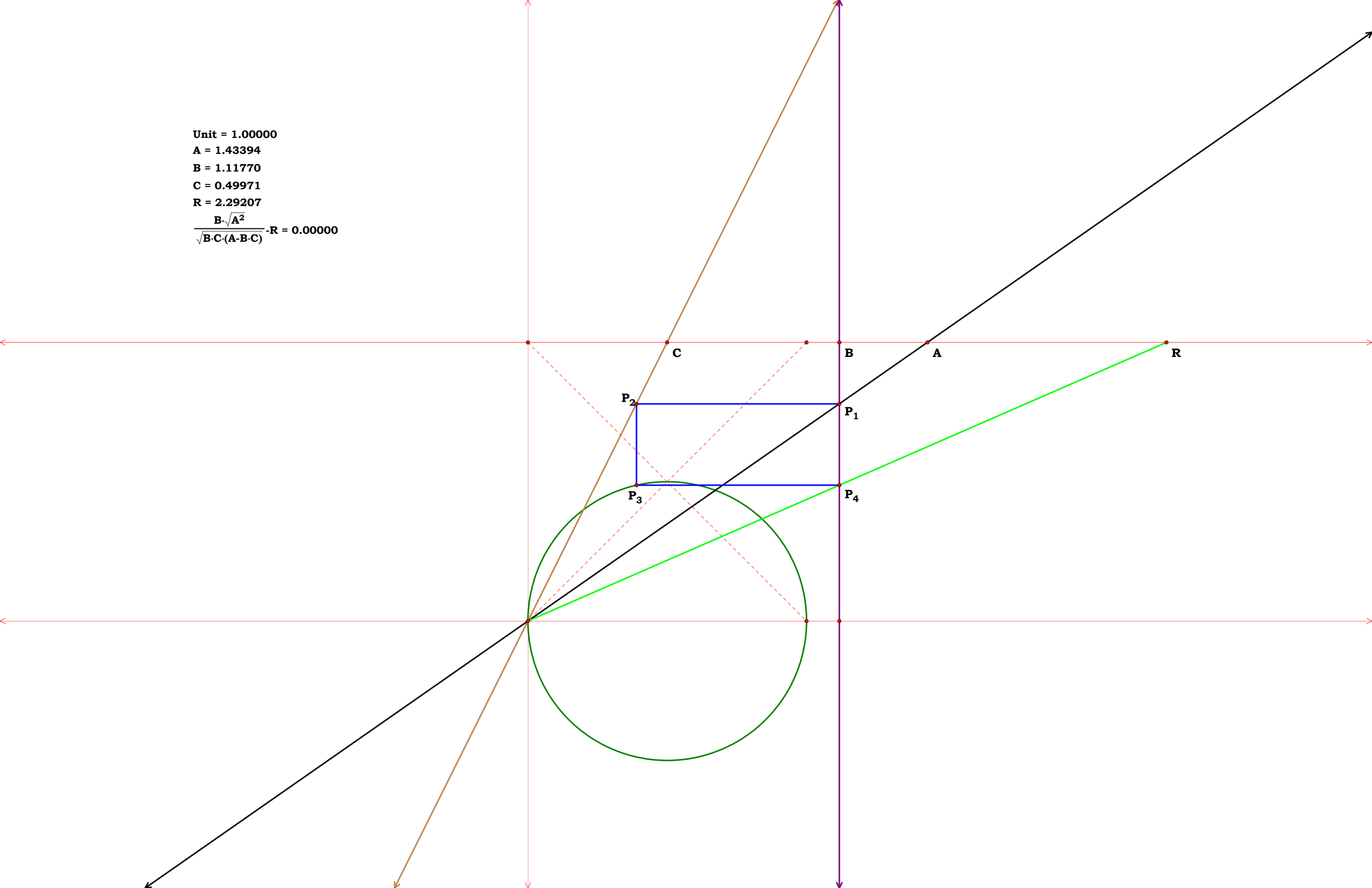
A = 1.43394

B = 1.11770

C = 0.49971

R = 2.29207

$$\frac{B\cdot\sqrt{A^2}}{\sqrt{B\cdot C\cdot(A-B\cdot C)}}-R = 0.00000$$



Unit = 1.00000

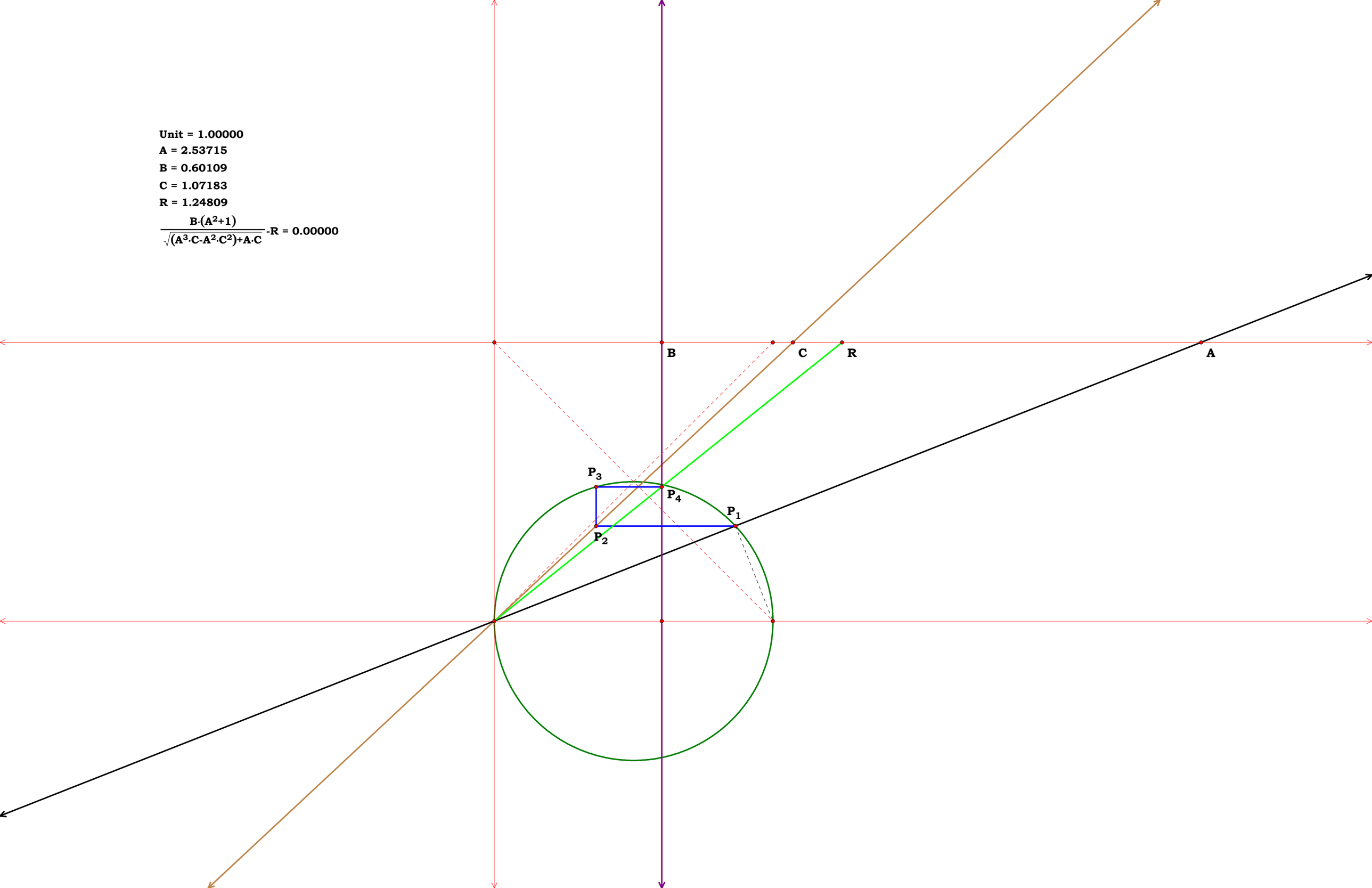
A = 2.53715

B = 0.60109

C = 1.07183

R = 1.24809

$$\frac{B\cdot(A^2+1)}{\sqrt{(A^3\cdot C-A^2\cdot C^2)+A\cdot C}}-R = 0.00000$$



Unit = 1.00000

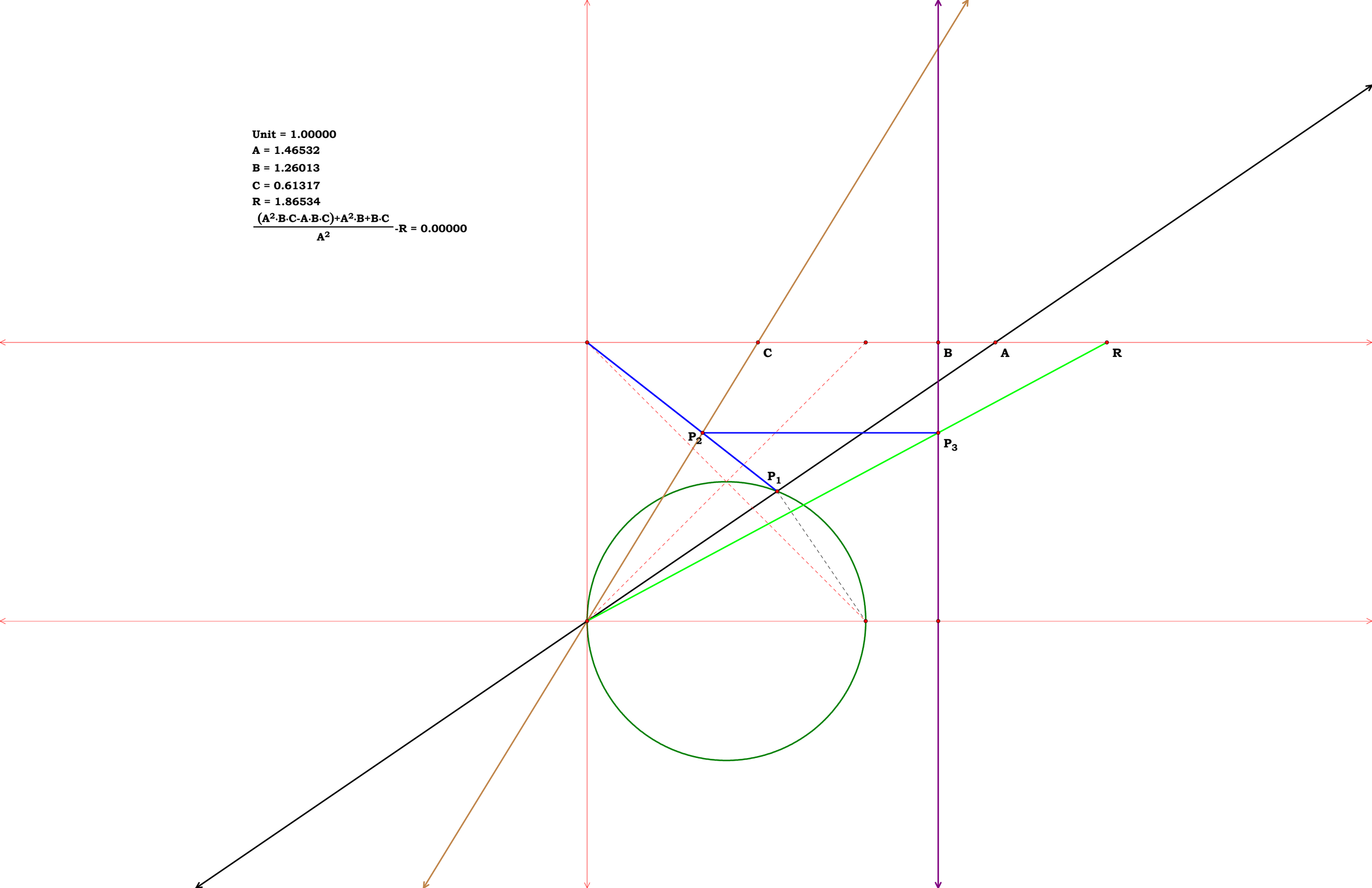
A = 1.46532

B = 1.26013

C = 0.61317

R = 1.86534

$$\frac{(A^2 \cdot B \cdot C - A \cdot B \cdot C) + A^2 \cdot B + B \cdot C}{A^2} - R = 0.00000$$



Unit = 1.00000

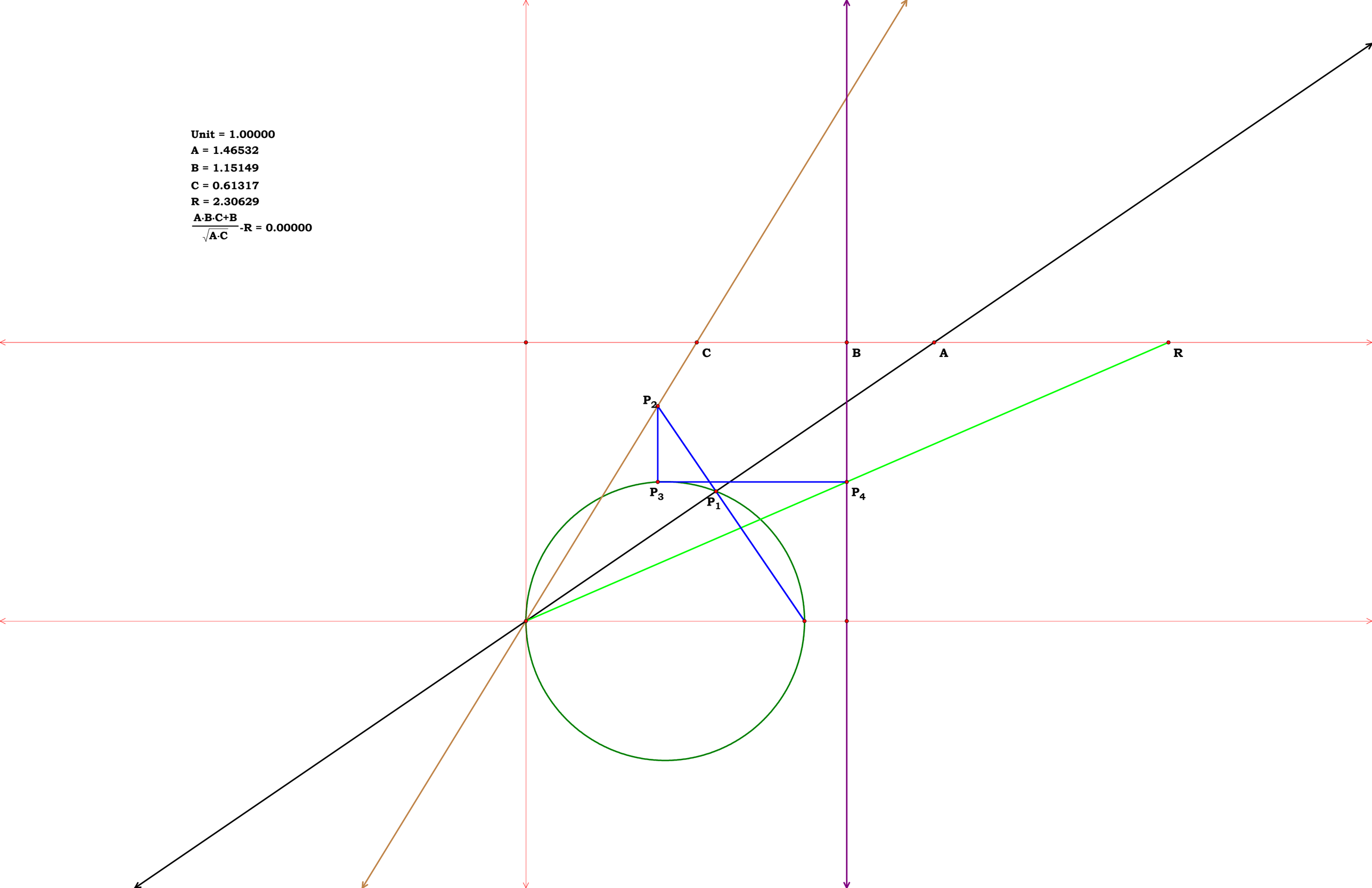
A = 1.46532

B = 1.15149

C = 0.61317

R = 2.30629

$\frac{A \cdot B \cdot C + B}{\sqrt{A \cdot C}} - R = 0.00000$



Unit = 1.00000

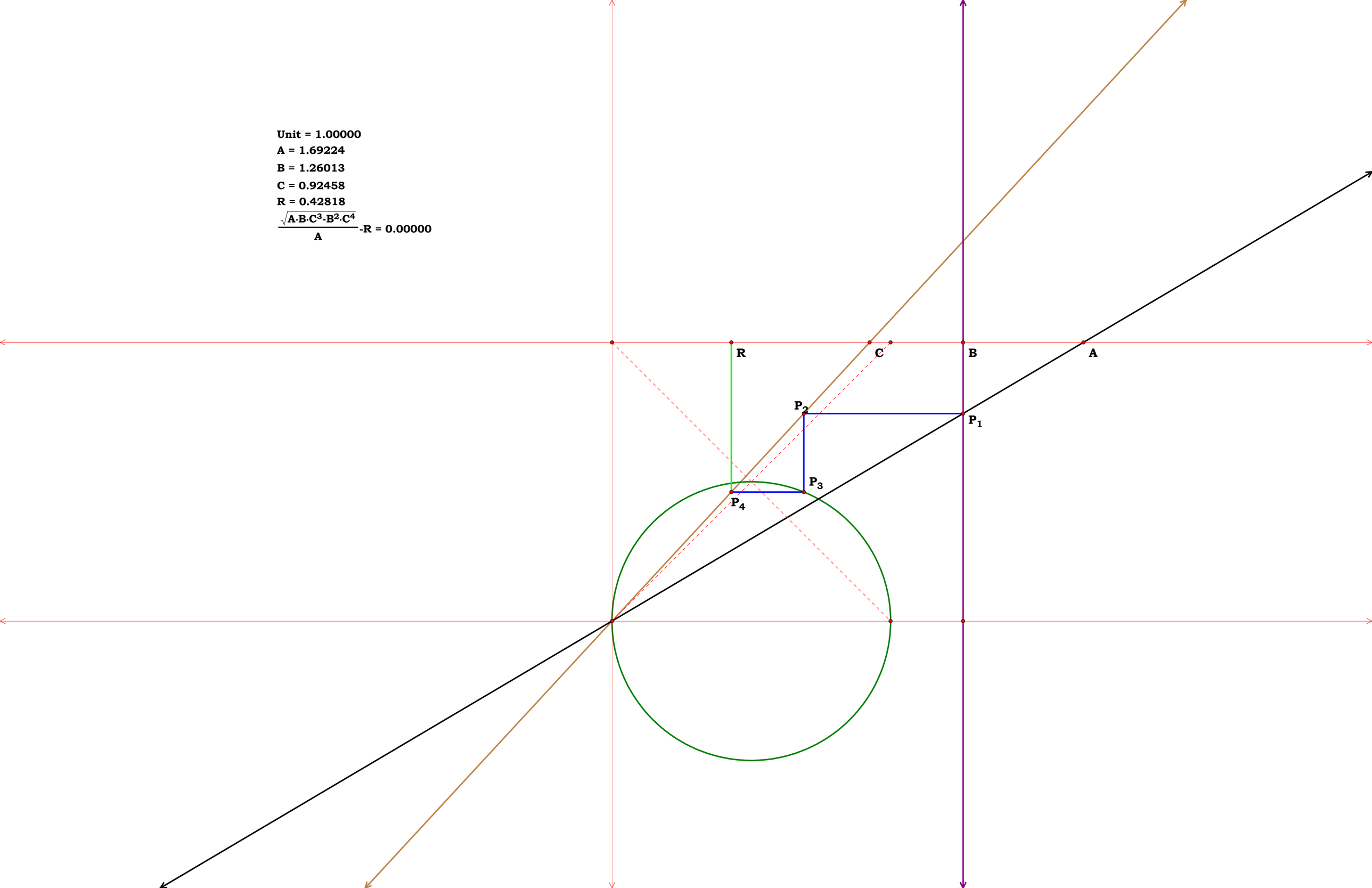
A = 1.69224

B = 1.26013

C = 0.92458

R = 0.42818

$$\frac{\sqrt{A \cdot B \cdot C^3 - B^2 \cdot C^4}}{A} - R = 0.00000$$



Unit = 1.00000

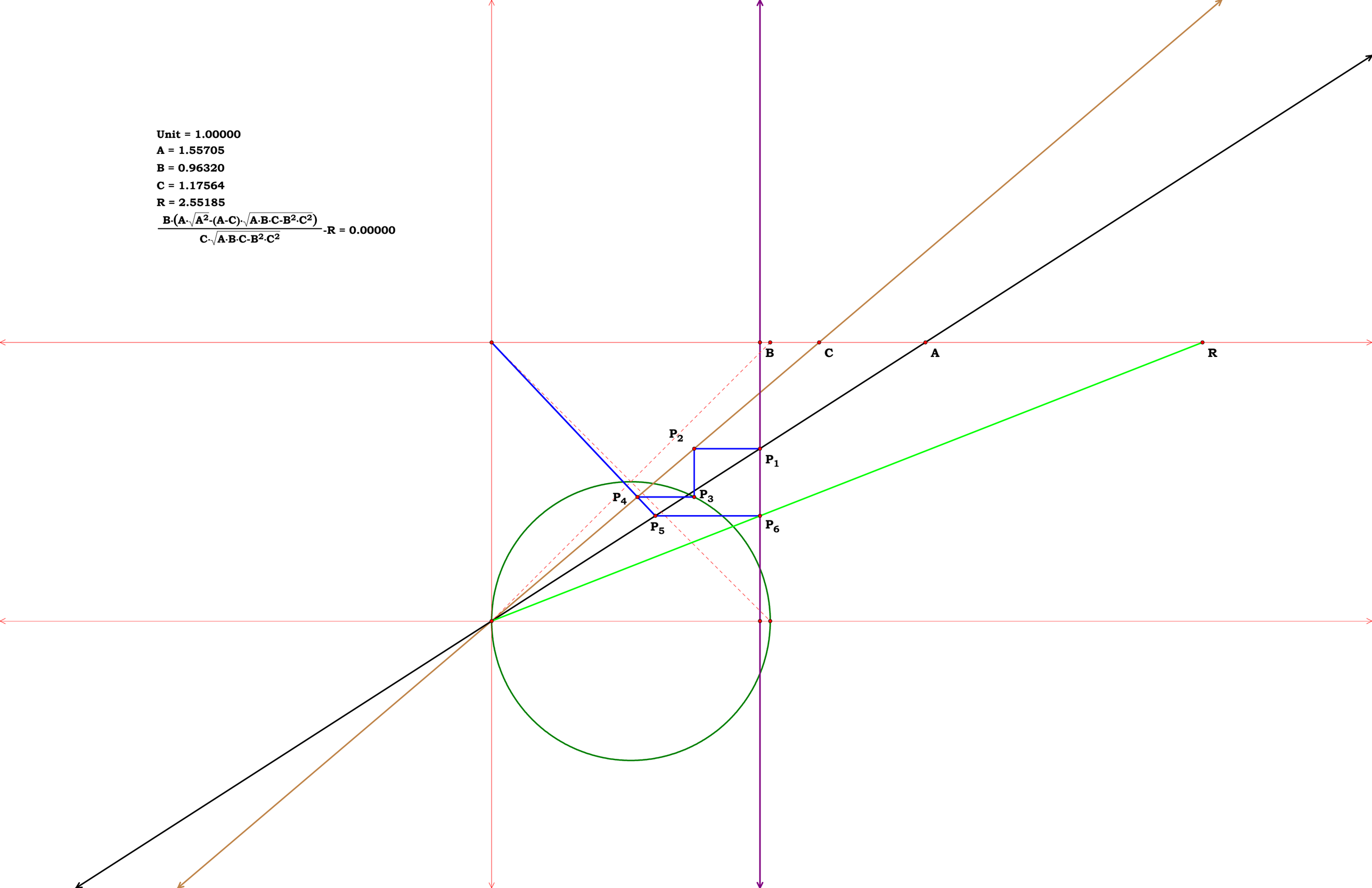
A = 1.55705

B = 0.96320

C = 1.17564

R = 2.55185

$$\frac{B\cdot\left(A\cdot\sqrt{A^2}-(A-C)\cdot\sqrt{A\cdot B\cdot C-B^2\cdot C^2}\right)}{C\cdot\sqrt{A\cdot B\cdot C-B^2\cdot C^2}}-R = 0.00000$$



Unit = 1.00000

A = 1.93123

B = 1.05735

C = 0.66145

D = 0.80870

R = 0.42938

$$\frac{D\cdot\left(\sqrt{(D\cdot((A\cdot B+A\cdot C)-B\cdot C)-2\cdot A\cdot B\cdot C)\cdot(2\cdot A\cdot B\cdot C-3\cdot D\cdot((A\cdot B+A\cdot C)-B\cdot C))}-\sqrt{D^2}\cdot\sqrt{(A\cdot(B+C)-B\cdot C)^2}\right)\cdot((A\cdot B+A\cdot C)-B\cdot C)}{2\cdot\sqrt{D^2}\cdot\sqrt{(A\cdot(B+C)-B\cdot C)^2}\cdot((A\cdot B\cdot C-A\cdot B\cdot D-A\cdot C\cdot D)+B\cdot C\cdot D)}-R = 0.00000$$

R C D B A

Unit = 1.00000

A = 1.46532

B = 1.26013

C = 0.86422

D = 0.94630

R = 0.22554

$$\frac{A\cdot D\cdot\left(\sqrt{(A\cdot D)^2}-\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}\right)}{2\cdot(A\cdot D-B\cdot C)\cdot\sqrt{(A\cdot D)^2}}-R = 0.00000$$

R

C

D

B

A

P_2

P_1

P_4

P_3

Unit = 1.00000

A = 1.16115

B = 0.71938

C = 1.58844

D = 1.24806

R = 1.83968

EN = 0.45307

$$EN-\frac{\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}}{2\cdot\sqrt{(A\cdot D)^2}} = 0.00000$$

$$\frac{\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}}{2\cdot\sqrt{(A\cdot D)^2}} = 0.45307$$

$$\frac{\left(\sqrt{\sqrt{A^2}\cdot B\cdot\sqrt{(((A-2\cdot EN\cdot A)+2\cdot A\cdot D)-2\cdot B\cdot C)^2}}\right)}{\left(\sqrt{A^2}\cdot\sqrt{D\cdot(2\cdot EN-1)\cdot(2\cdot B\cdot C-A\cdot D-A-2\cdot EN\cdot A\cdot(D-1))}\right)}-R = 0.00000$$

very close but not perfect. Something to work on.

B

A

D

C

R

Unit = 1.00000

A = 1.74776

B = 1.26013

C = 0.82801

D = 0.81836

R = 0.36932

$$\frac{C\cdot(D\cdot((A\cdot B+A\cdot C)-B\cdot C)-A\cdot B\cdot C)}{D\cdot((A\cdot B+A\cdot C)-B\cdot C)} = 0.12003$$

BF = 0.12003

$$\frac{BF}{\sqrt{BF\cdot(1-BF)}}-R = 0.00000$$

R

D

B

A

Unit = 1.00000

A = 1.26978

B = 0.94872

C = 0.75801

D = 0.87388

R = 2.36532

$$\frac{A\cdot D\cdot\left(\sqrt{(A\cdot D)^2}-\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}\right)}{\left(A\cdot\sqrt{(A\cdot D)^2}-A\cdot\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}\right)+2\cdot\sqrt{(A\cdot D)^2}\cdot(A\cdot D-B\cdot C)} = 0.27977$$

BH = 0.27977

$$\frac{B\cdot\left((BH+C)-C\cdot\sqrt{BH\cdot(1-BH)}\right)}{BH}-R = 0.00000$$

a = 0.27977

$$\frac{B\cdot\left((a+C)-C\cdot\sqrt{a\cdot(1-a)}\right)}{a}-R = 0.00000$$

a

C D B A R

P_1 P_2 P_3 P_4 P_5 P_6 P_7 P_8

Unit = 1.00000
A = 1.46532
B = 1.22633
C = 1.09597
D = 1.69707
R = 2.83077

$$\frac{B\cdot C\cdot\left(\left(\sqrt{(A\cdot D)^2}\cdot\sqrt{(2\cdot B\cdot C-3\cdot A\cdot D)\cdot(A\cdot D-2\cdot B\cdot C)}-(A\cdot D)^2\cdot(2\cdot D+1)\right)+\left(2\cdot A\cdot B\cdot C\cdot D^2\right)\right)}{D\cdot\sqrt{(A\cdot D)^2}\cdot\left(\sqrt{(2\cdot B\cdot C-3\cdot A\cdot D)\cdot(A\cdot D-2\cdot B\cdot C)}-\sqrt{(A\cdot D)^2}\right)}-R = 0.00000$$

C
B
A
D
R
P_1
P_2
P_3
P_4
P_5
P_6
P_7

Unit = 1.00000

A = 2.48887

B = 0.76284

C = 1.66086

D = 0.89319

R = 1.24933

$$\frac{B\cdot\left(\left(A\cdot\sqrt{(A\cdot D)^2}-A\cdot\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}\right)+2\cdot\sqrt{(A\cdot D)^2}\cdot(A\cdot D-B\cdot C)\right)}{2\cdot\sqrt{(A\cdot D)^2}\cdot(A\cdot D-B\cdot C)}-R = 0.00000$$

B

D

R

C

A

P_5

P_6

P_4

P_3

P_2

P_1

Unit = 1.00000
A = 1.46532
B = 1.05252
C = 0.73628
D = 0.88112
R = 2.00177

$$\frac{A\cdot D\cdot\left(\sqrt{(A\cdot D)^2}+\sqrt{(A\cdot D-2\cdot B\cdot C)\cdot(2\cdot B\cdot C-3\cdot A\cdot D)}\right)}{2\cdot(A\cdot D-B\cdot C)\cdot\sqrt{(A\cdot D)^2}}-R = 0.00000$$

C D B A R

P_2 P_1 P_4 P_3

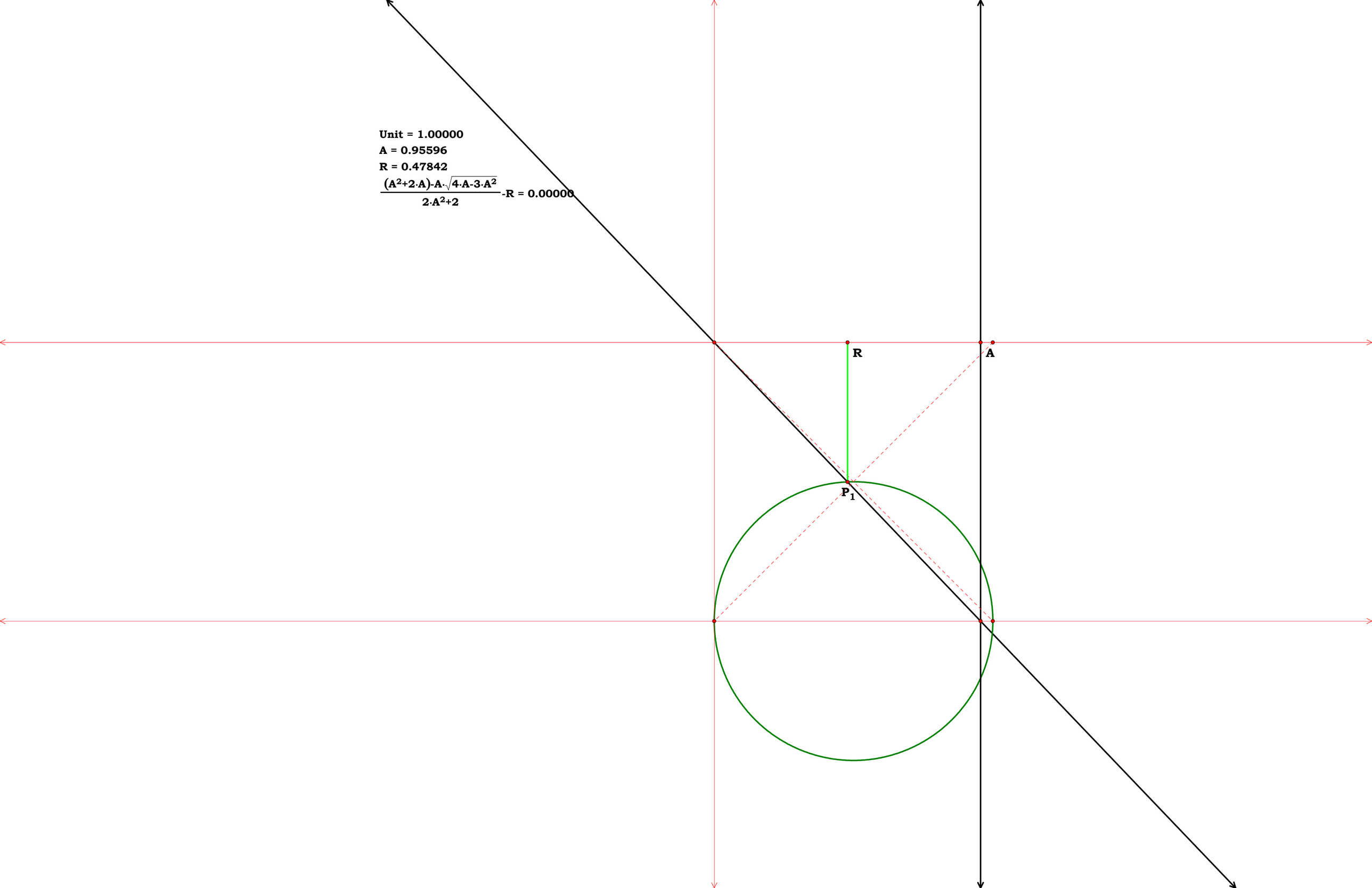
Unit = 1.00000
A = 1.46532
B = 0.92216
C = 0.76007
D = 1.85639
R = 1.21908
$\frac{B\cdot D\cdot(C\cdot((A^2-A)+1)+A^2)}{(A^2\cdot((D-C)+C\cdot D)-A\cdot C\cdot D)+C\cdot D} - R = 0.00000$

C
B
R
A
D
P_3
P_4
P_2
P_1

Unit = 1.00000
A = 1.61258
B = 0.80146
C = 1.26254
D = 1.11287
R = 2.28727
((A·B·D-2·A·B·C)+A·C·D)-B·C·D = -0.68551
(2·A·B·C-3·A·B·D-3·A·C·D)+3·B·C·D = -4.47038
$\sqrt{D^2}$ = 1.11287
$\sqrt{((A\cdot B+A\cdot C)-B\cdot C)^2}$ = 2.31648
(A·B+A·C)-B·C = 2.31648
A·((B·D-B·C)+C·D)-B·C·D = 0.94622

$$\frac{D\cdot\left(\sqrt{(((A\cdot B\cdot D-2\cdot A\cdot B\cdot C)+A\cdot C\cdot D)-B\cdot C\cdot D)\cdot((2\cdot A\cdot B\cdot C-3\cdot A\cdot B\cdot D-3\cdot A\cdot C\cdot D)+3\cdot B\cdot C\cdot D)}+\sqrt{D^2}\cdot\sqrt{((A\cdot B+A\cdot C)-B\cdot C)^2}\right)\cdot((A\cdot B+A\cdot C)-B\cdot C)}{2\cdot\sqrt{D^2}\cdot\sqrt{((A\cdot B+A\cdot C)-B\cdot C)^2}\cdot(A\cdot((B\cdot D-B\cdot C)+C\cdot D)-B\cdot C\cdot D)}-R = 0.00000$$

B
D
C
A
R
P_2
P_1
P_3
P_4

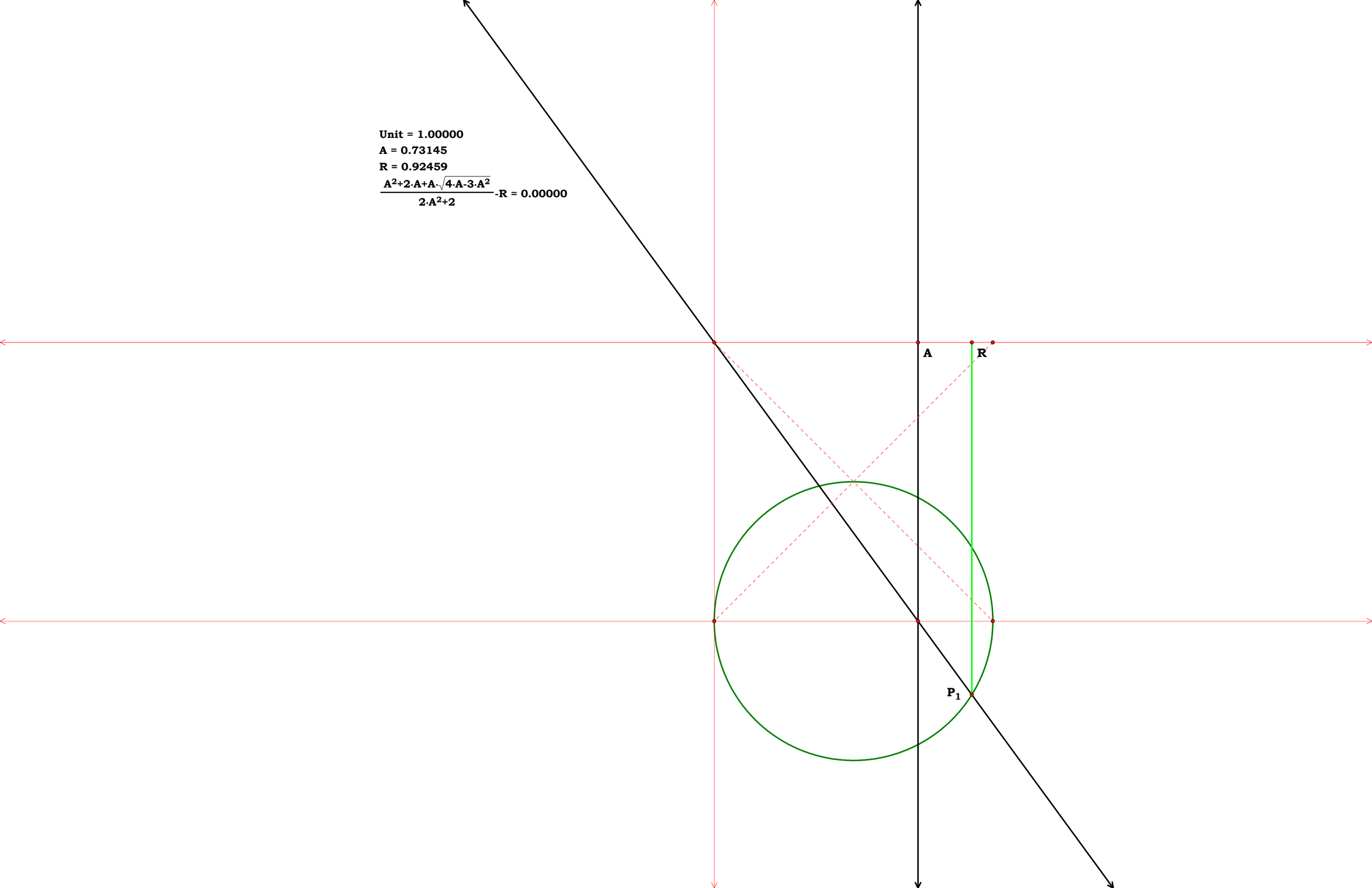

Unit = 1.00000
A = 0.95596
R = 0.47842
$\frac{(A^2+2\cdot A)-A\cdot\sqrt{4\cdot A-3\cdot A^2}}{2\cdot A^2+2}$-R = 0.00000
R
A
P_1

Unit = 1.00000

A = 0.73145

R = 0.92459

$$\frac{A^2+2\cdot A+A\cdot\sqrt{4\cdot A-3\cdot A^2}}{2\cdot A^2+2}-R = 0.00000$$



Unit = 1.00000

A = 1.24081

R = 1.35781

$$\frac{(A^2+2\cdot A)-A\cdot\sqrt{4\cdot A-3\cdot A^2}}{(2\cdot A^2-A)+\sqrt{4\cdot A-3\cdot A^2}}-R = 0.00000$$

A

R

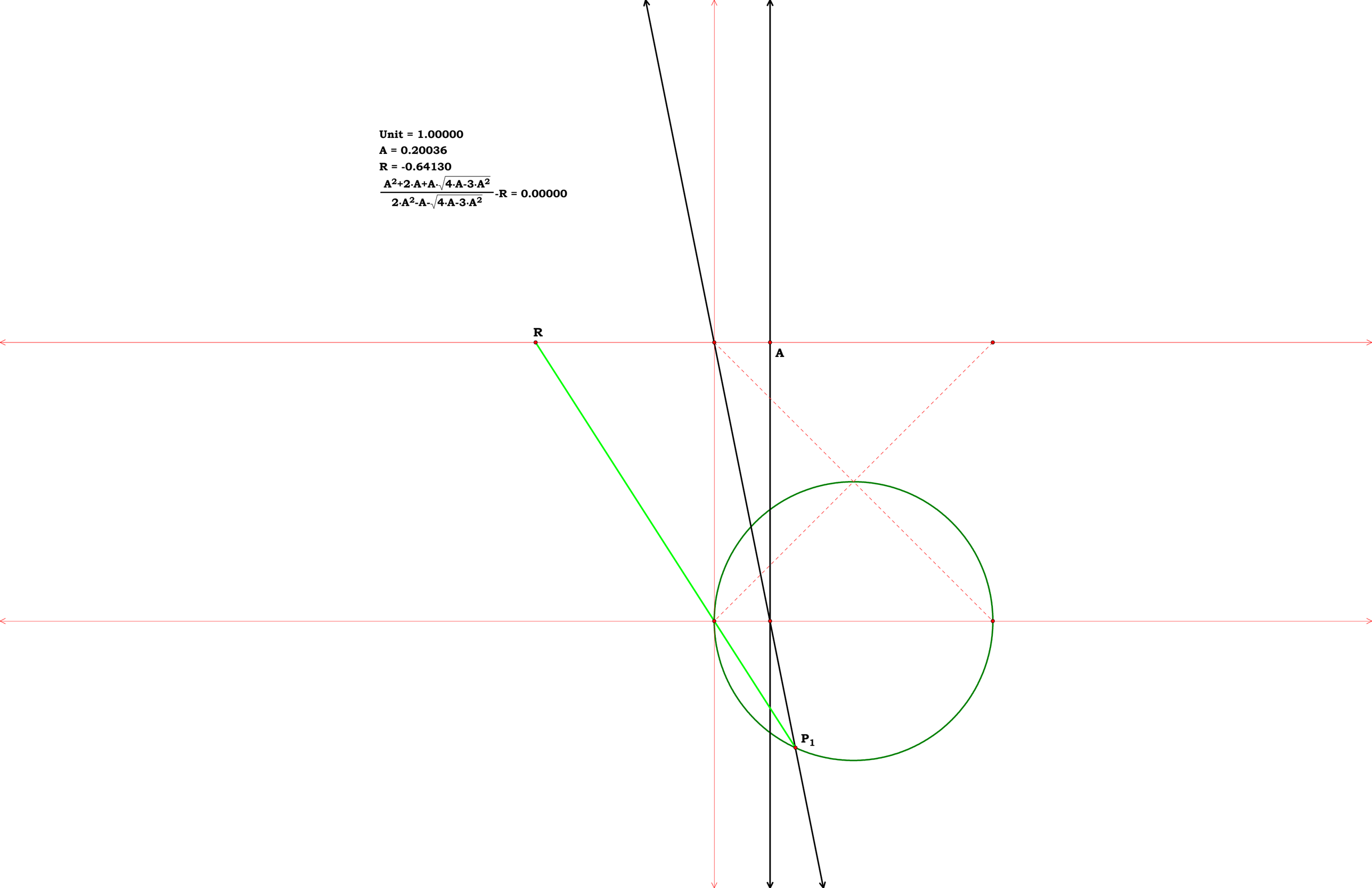
P_1

Unit = 1.00000

A = 0.20036

R = -0.64130

$$\frac{A^2+2\cdot A+A\cdot\sqrt{4\cdot A-3\cdot A^2}}{2\cdot A^2-A-\sqrt{4\cdot A-3\cdot A^2}}-R = 0.00000$$

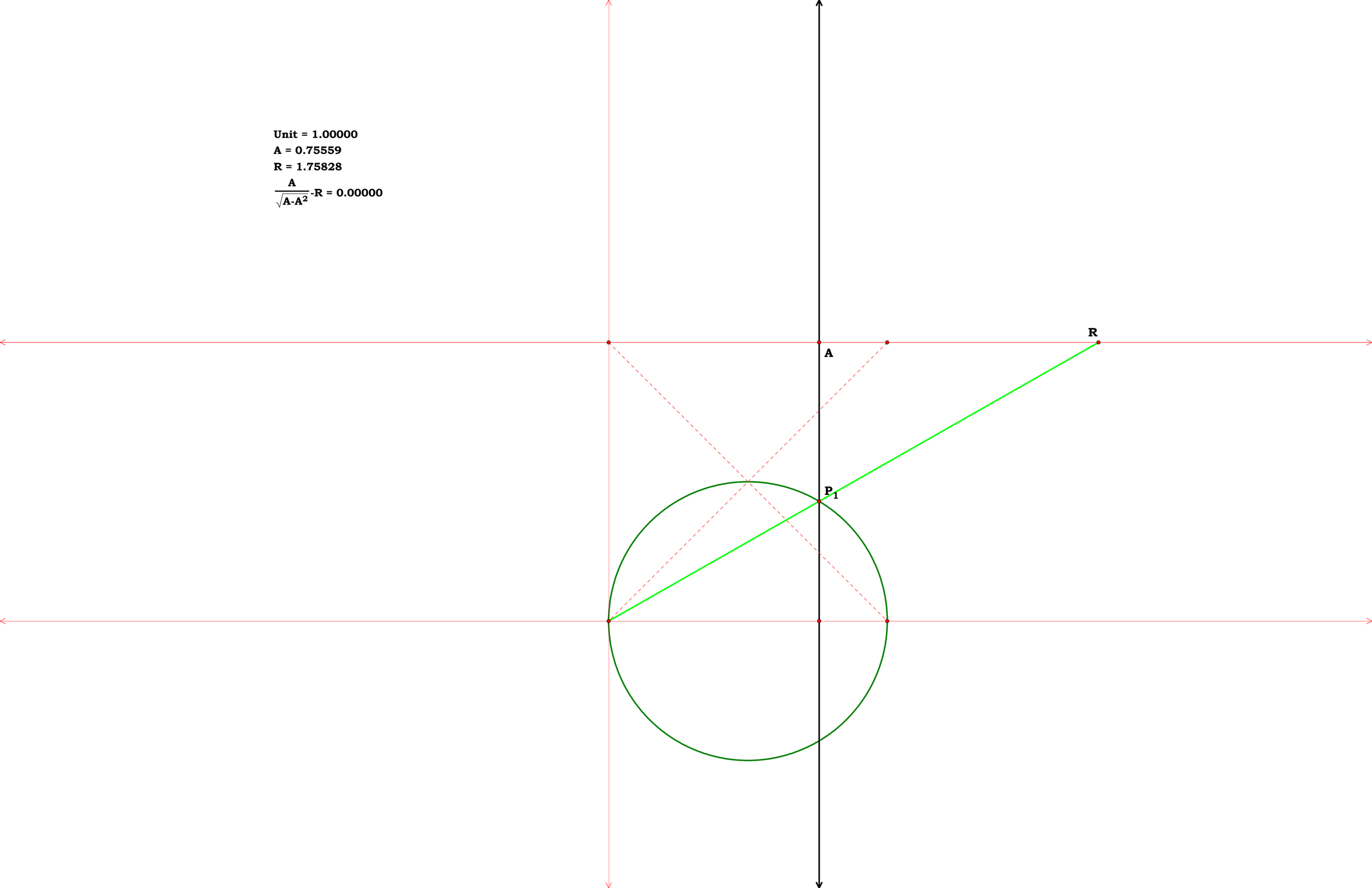


Unit = 1.00000

A = 0.75559

R = 1.75828

$$\frac{A}{\sqrt{A-A^2}}-R = 0.00000$$

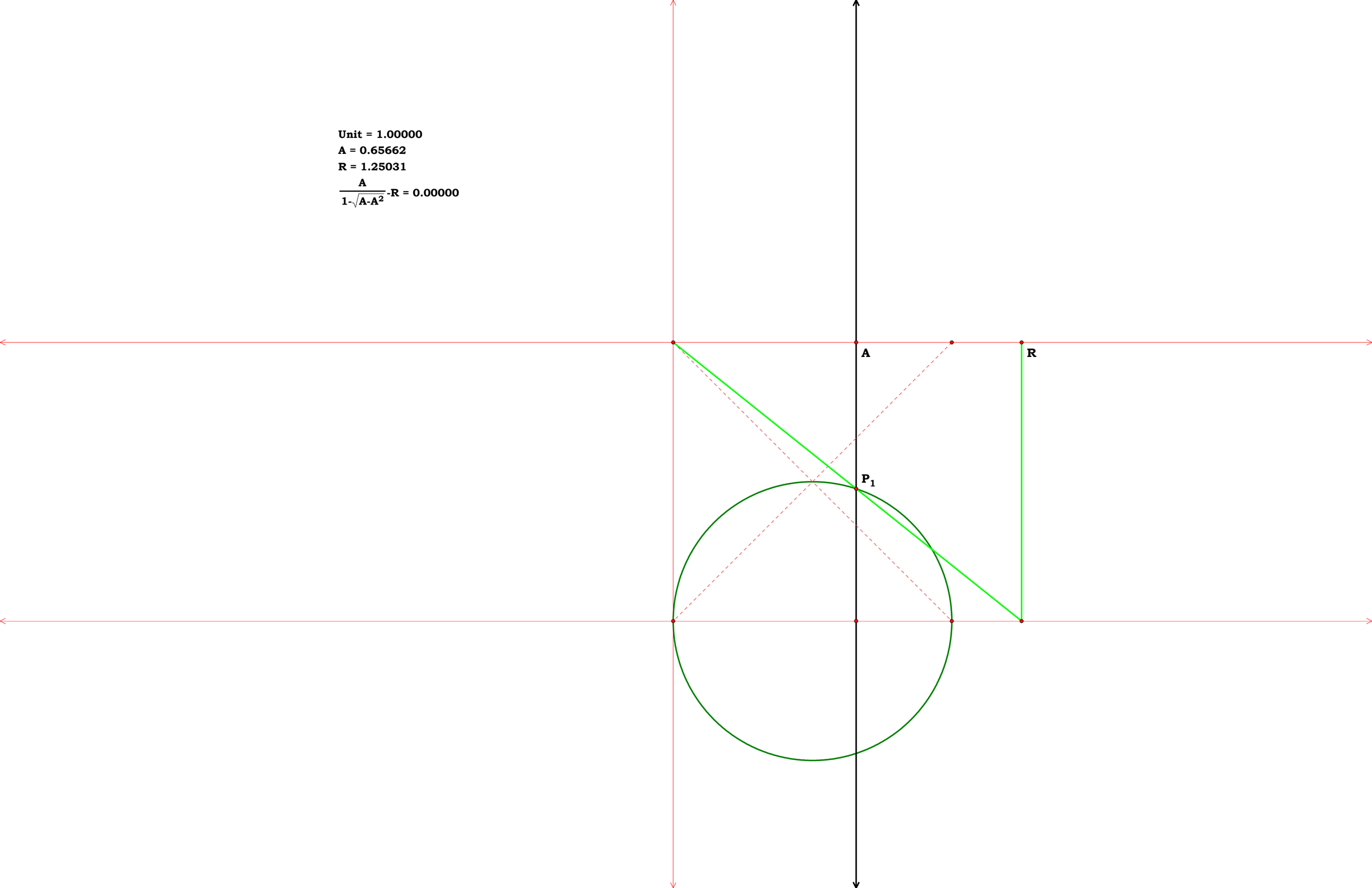


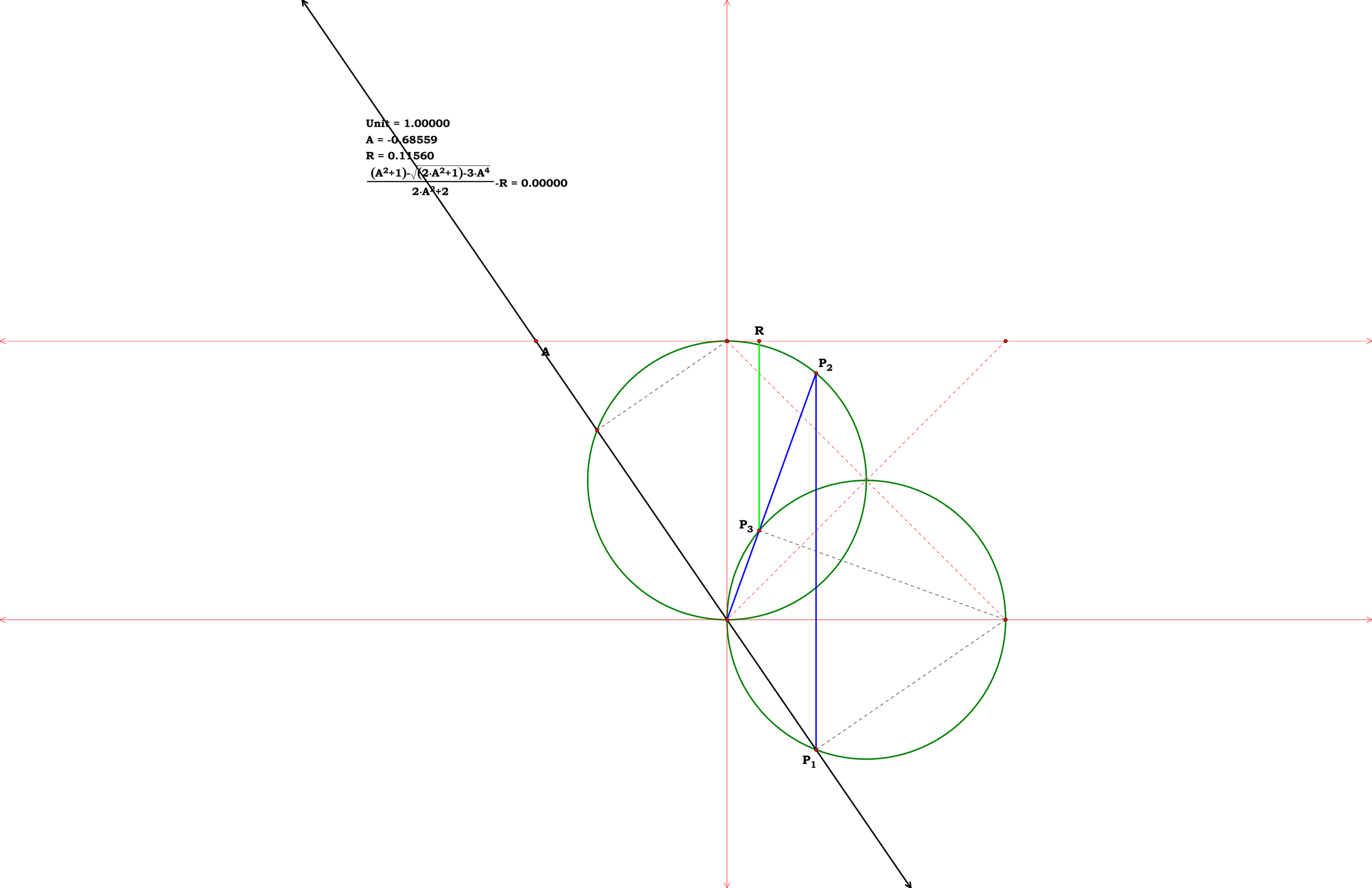
Unit = 1.00000

A = 0.65662

R = 1.25031

$$\frac{A}{1-\sqrt{A-A^2}}-R = 0.00000$$




Unit = 1.00000
A = -0.68559
R = 0.11560
$\frac{(A^2+1)-\sqrt{(2\cdot A^2+1)-3\cdot A^4}}{2\cdot A^2+2}$-R = 0.00000
A
R
P_2
P_3
P_1

Unit = 1.00000

A = -0.83284

R = 0.52051

$$\frac{(A^2+1)-\sqrt{(2\cdot A^2+1)-3\cdot A^4}}{2\cdot A^2}-R = 0.00000$$

A

R

P_2

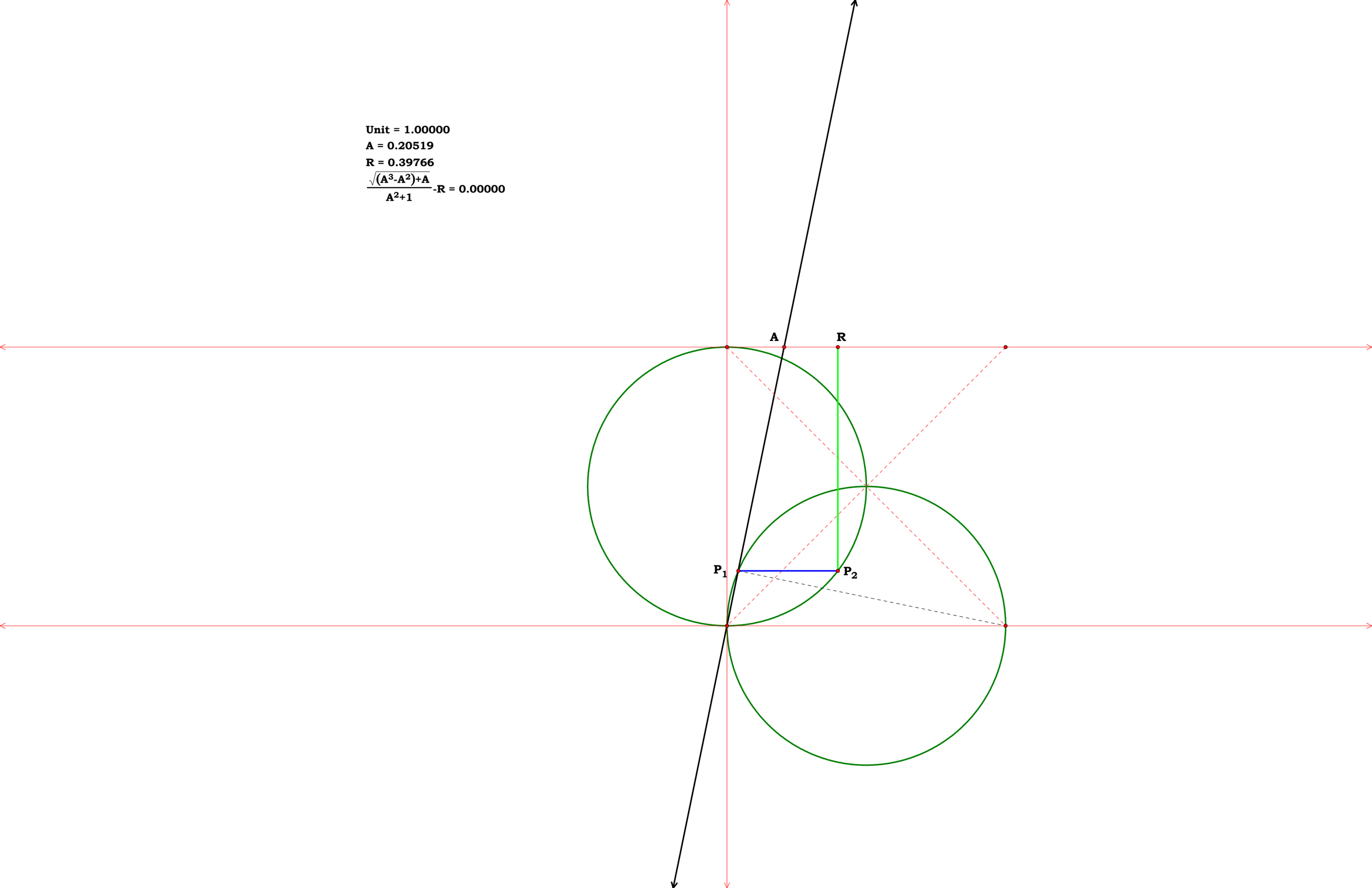
P_1

Unit = 1.00000

A = 0.20519

R = 0.39766

$$\frac{\sqrt{(A^3-A^2)+A}}{A^2+1}-R = 0.00000$$



Unit = 1.00000

A = -0.79905

R = 0.81329

$$\frac{A^2+1+\sqrt{(2\cdot A^2-3\cdot A^4)+1}}{2\cdot A^2+2}-R = 0.00000$$

A

R

P_3

P_2

P_1

Unit = 1.00000

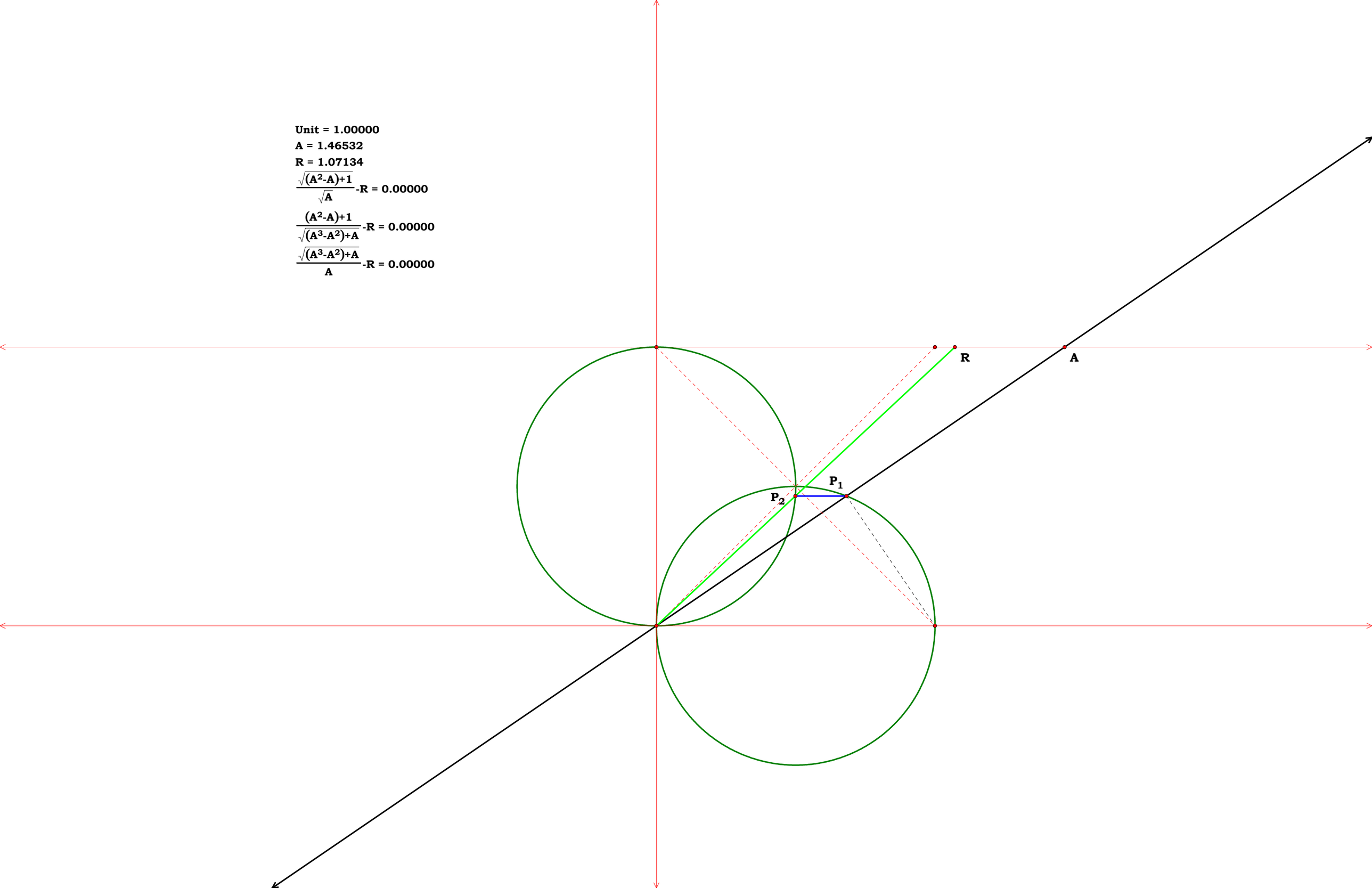
A = 1.46532

R = 1.07134

$\frac{\sqrt{(A^2-A)+1}}{\sqrt{A}}-R = 0.00000$

$\frac{(A^2-A)+1}{\sqrt{(A^3-A^2)+A}}-R = 0.00000$

$\frac{\sqrt{(A^3-A^2)+A}}{A}-R = 0.00000$



Unit = 1.00000

A = -0.85940

R = 1.79772

$$\frac{2\cdot A^2}{(A^2+1)-\sqrt{(2\cdot A^2+1)-3\cdot A^4}}-R = 0.00000$$

A

R

P_2

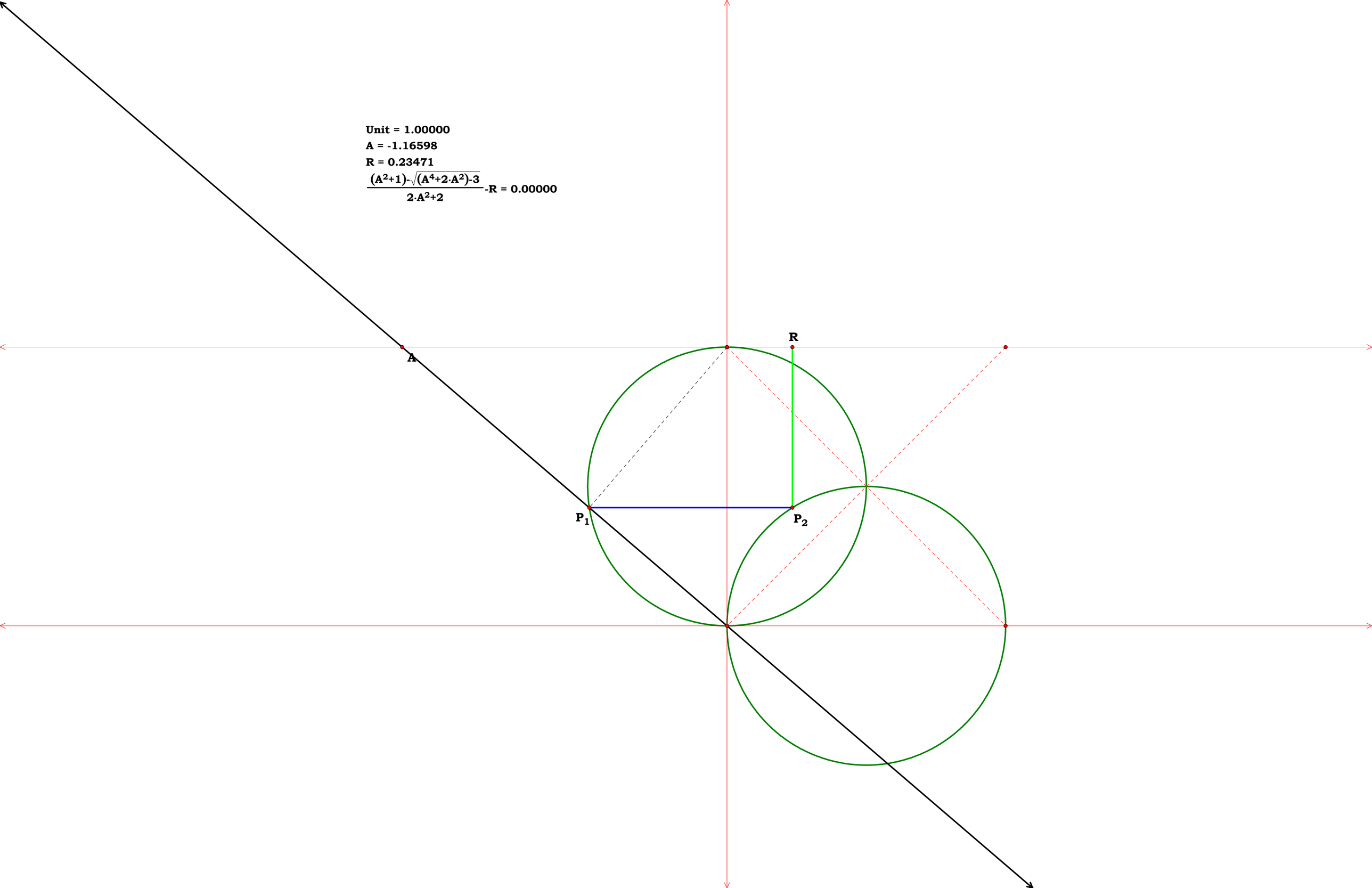
P_1

Unit = 1.00000

A = -1.16598

R = 0.23471

$$\frac{(A^2+1)-\sqrt{(A^4+2\cdot A^2)-3}}{2\cdot A^2+2}-R = 0.00000$$



Unit = 1.00000

A = -1.14425

R = 0.57739

$$\frac{(A^2+1)-\sqrt{(A^4+2\cdot A^2)-3}}{2}-R = 0.00000$$

A

R

P_1

P_2

Unit = 1.00000

A = -1.21185

R = 0.79309

$$\frac{A^2+1+\sqrt{(A^4+2\cdot A^2)-3}}{2\cdot A^2+2}-R = 0.00000$$

A

R

P_1

P_2

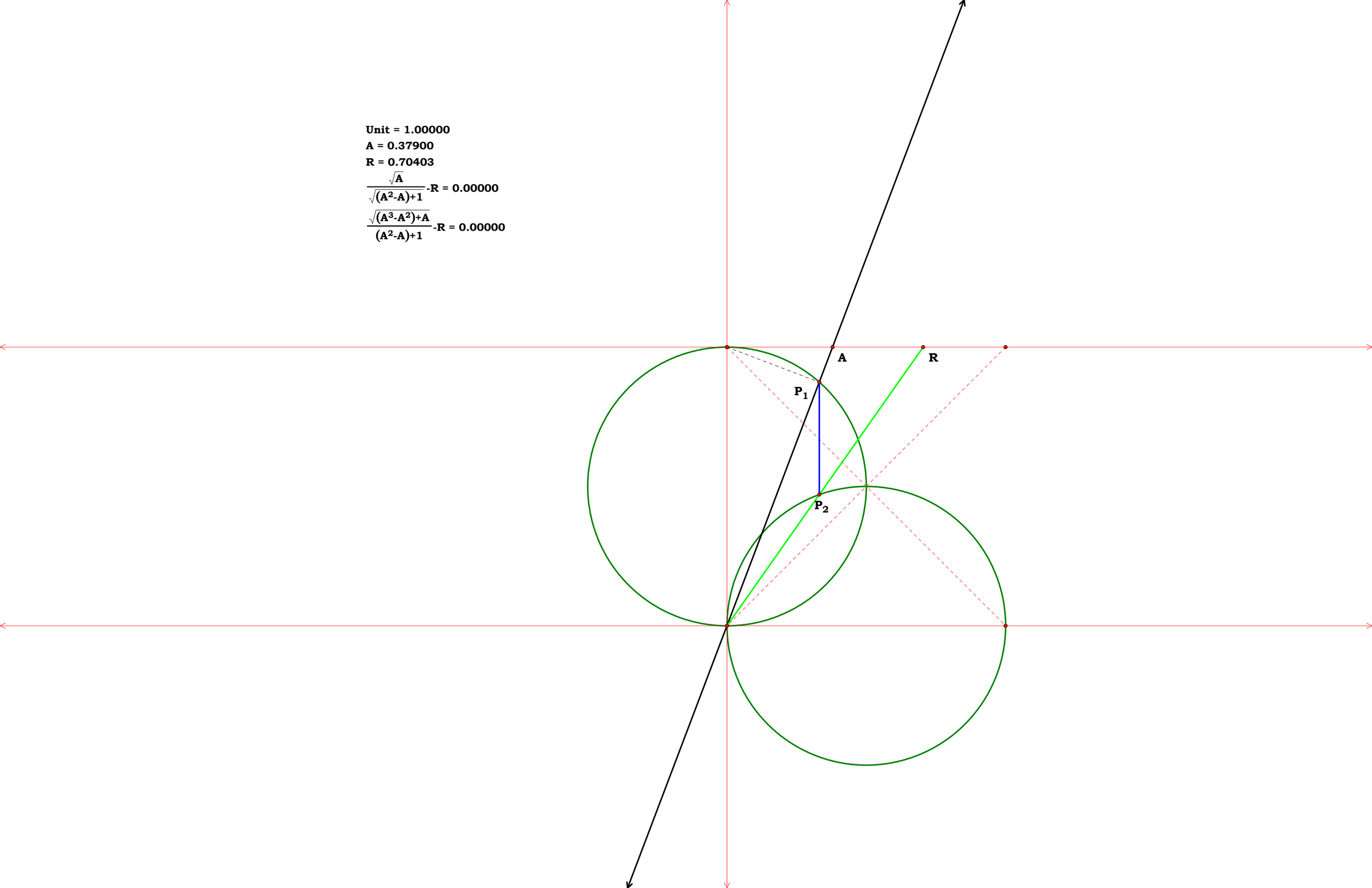
Unit = 1.00000

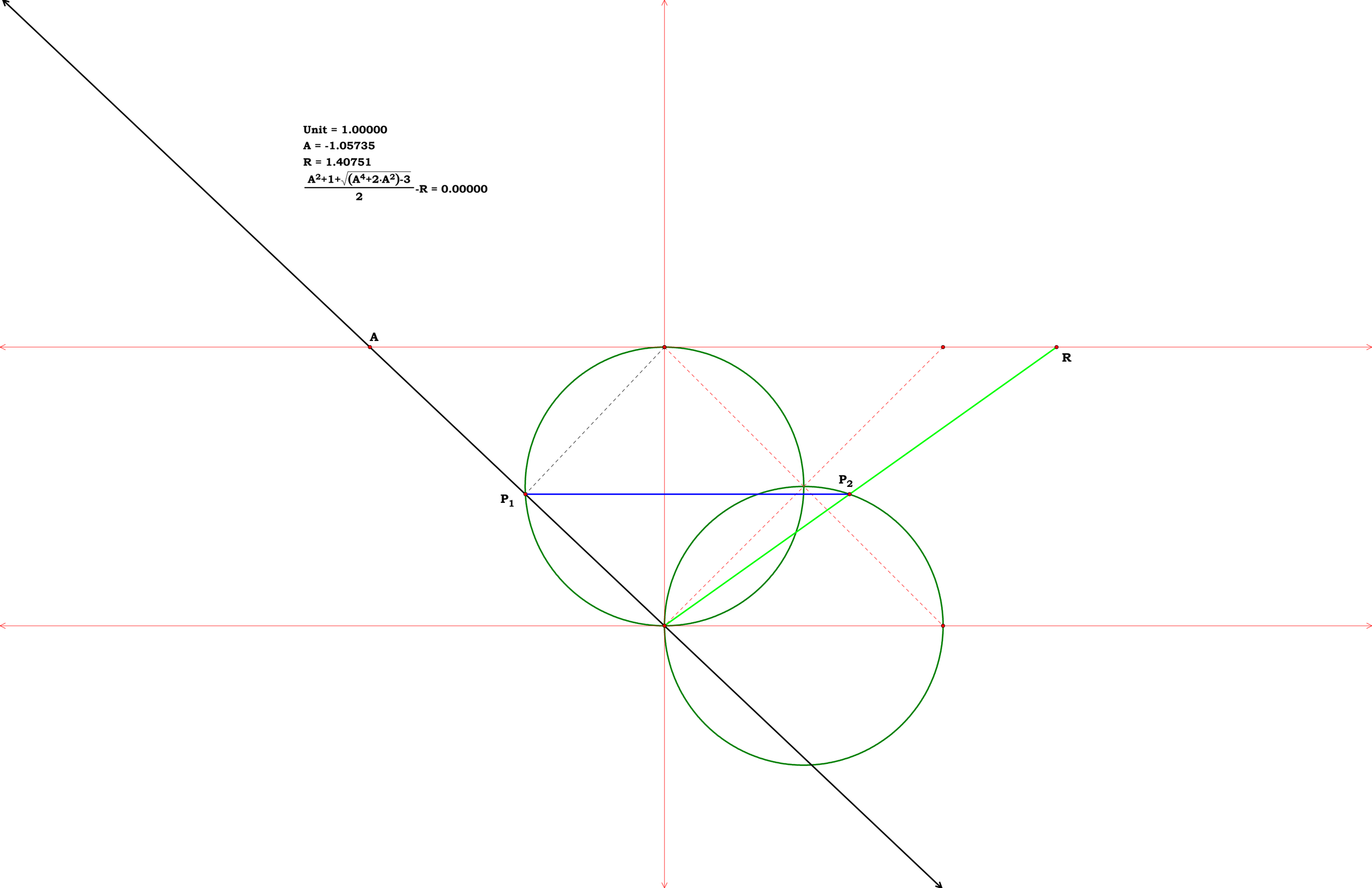
A = 0.37900

R = 0.70403

$\frac{\sqrt{A}}{\sqrt{(A^2-A)+1}}-R = 0.00000$

$\frac{\sqrt{(A^3-A^2)+A}}{(A^2-A)+1}-R = 0.00000$



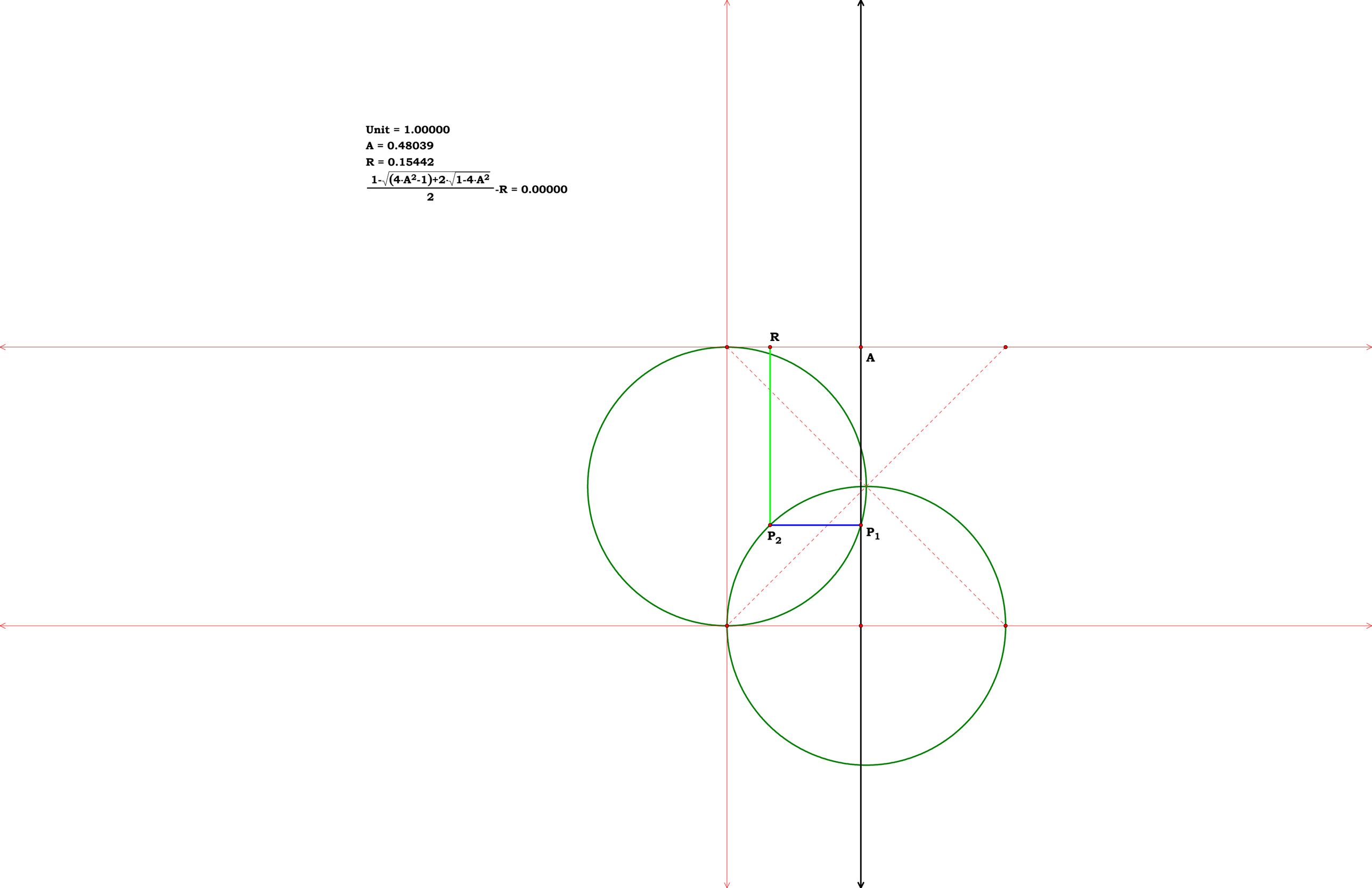

Unit = 1.00000
A = -1.05735
R = 1.40751
$\frac{A^2+1+\sqrt{(A^4+2\cdot A^2)-3}}{2}$-R = 0.00000
A
R
P1
P2

Unit = 1.00000

A = 0.48039

R = 0.15442

$$\frac{1-\sqrt{(4\cdot A^2-1)}+2\cdot\sqrt{1-4\cdot A^2}}{2}-R = 0.00000$$

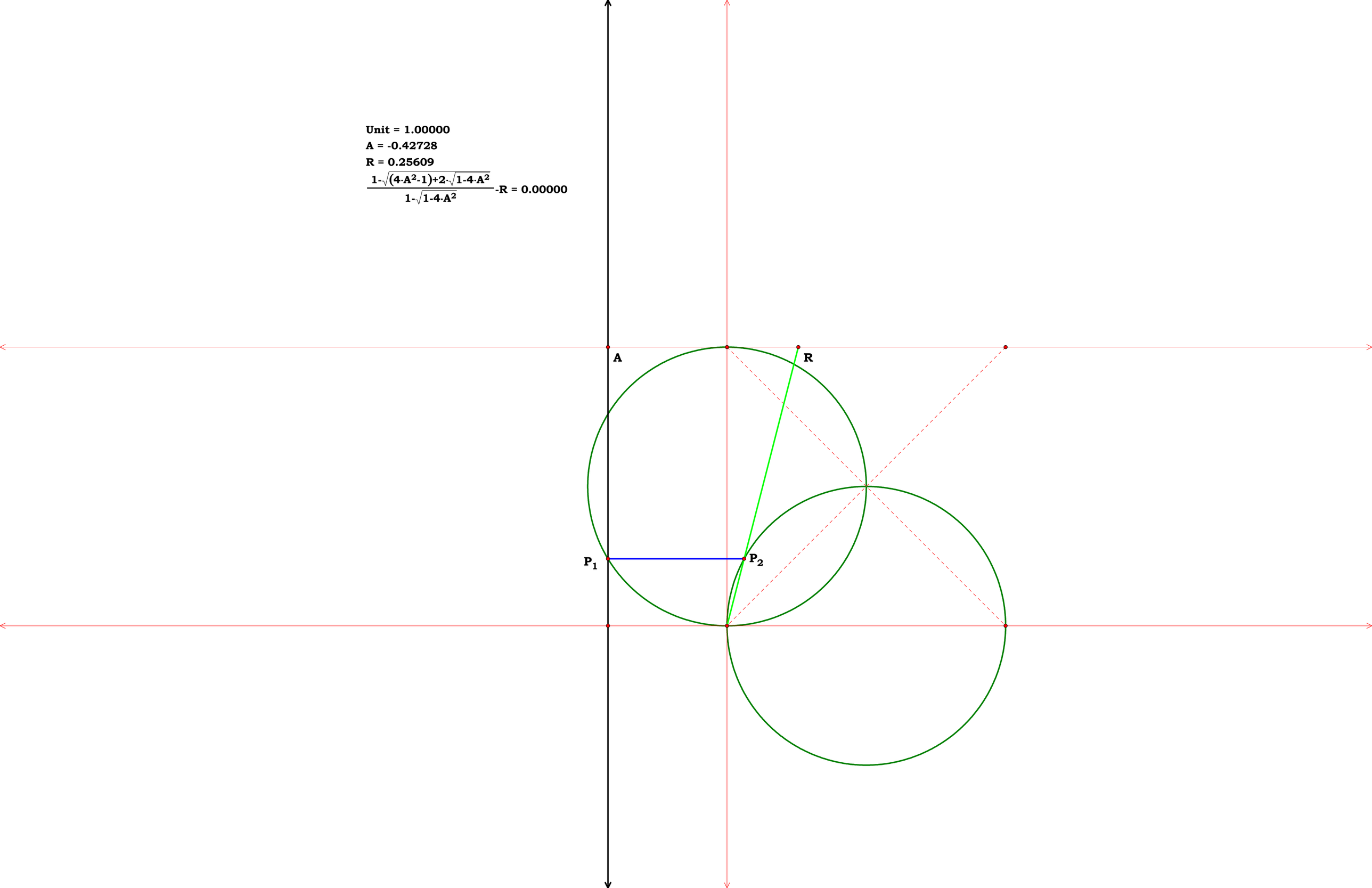


Unit = 1.00000

A = -0.42728

R = 0.25609

$$\frac{1-\sqrt{(4\cdot A^2-1)+2\cdot\sqrt{1-4\cdot A^2}}}{1-\sqrt{1-4\cdot A^2}}-R = 0.00000$$

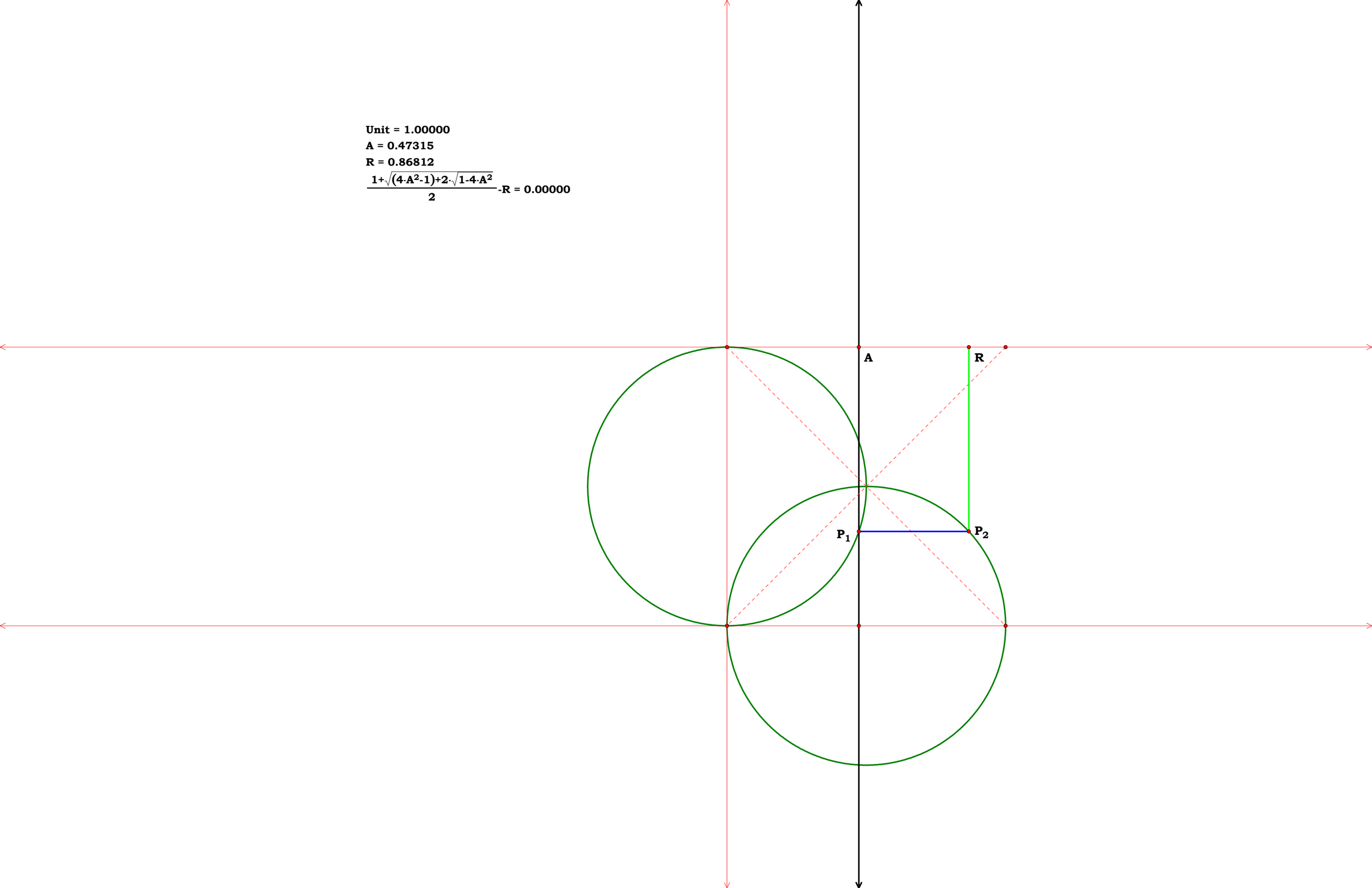


Unit = 1.00000

A = 0.47315

R = 0.86812

$$\frac{1+\sqrt{(4\cdot A^2-1)}+2\cdot\sqrt{1-4\cdot A^2}}{2}-R = 0.00000$$

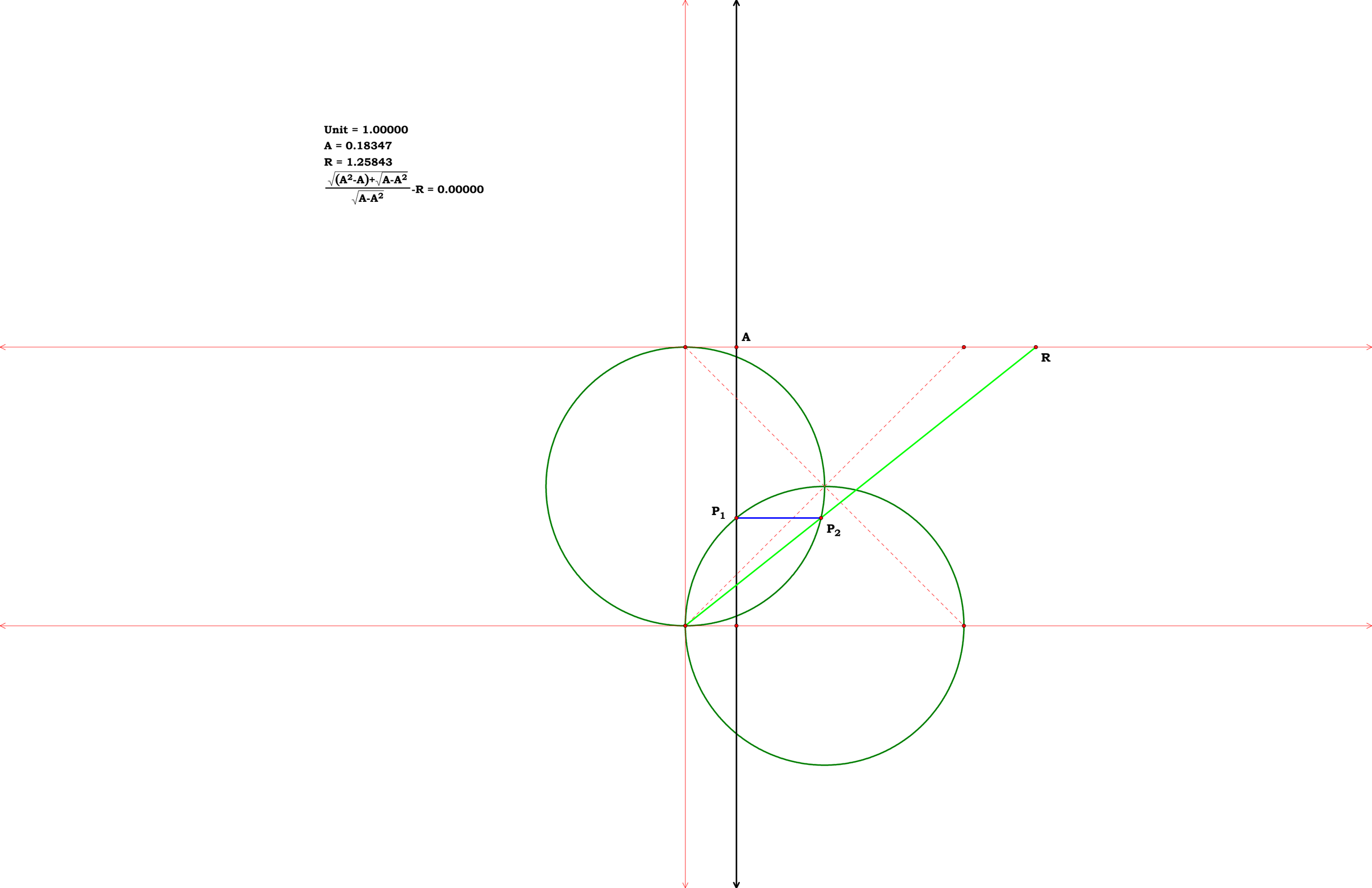


Unit = 1.00000

A = 0.18347

R = 1.25843

$$\frac{\sqrt{(A^2-A)}+\sqrt{A-A^2}}{\sqrt{A-A^2}}-R = 0.00000$$

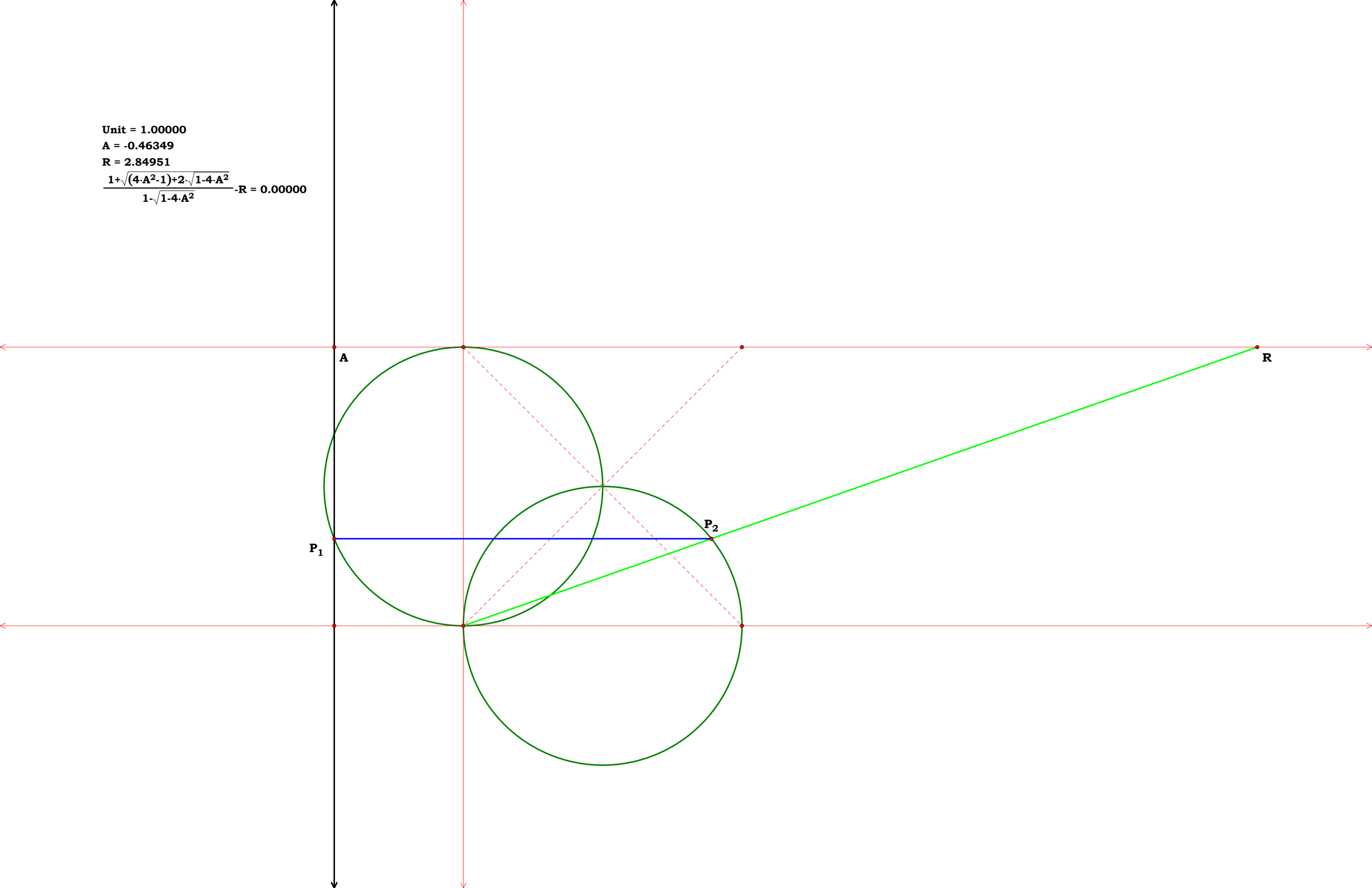


Unit = 1.00000

A = -0.46349

R = 2.84951

$$\frac{1+\sqrt{(4\cdot A^2-1)+2\cdot\sqrt{1-4\cdot A^2}}}{1-\sqrt{1-4\cdot A^2}}-R = 0.00000$$



Unit = 1.00000

A = 0.55523

B = 1.26013

R = 0.34153

$$\frac{(A+B)-\sqrt{(2\cdot A\cdot B+B^2)-3\cdot A^2}}{2\cdot A}-R = 0.00000$$

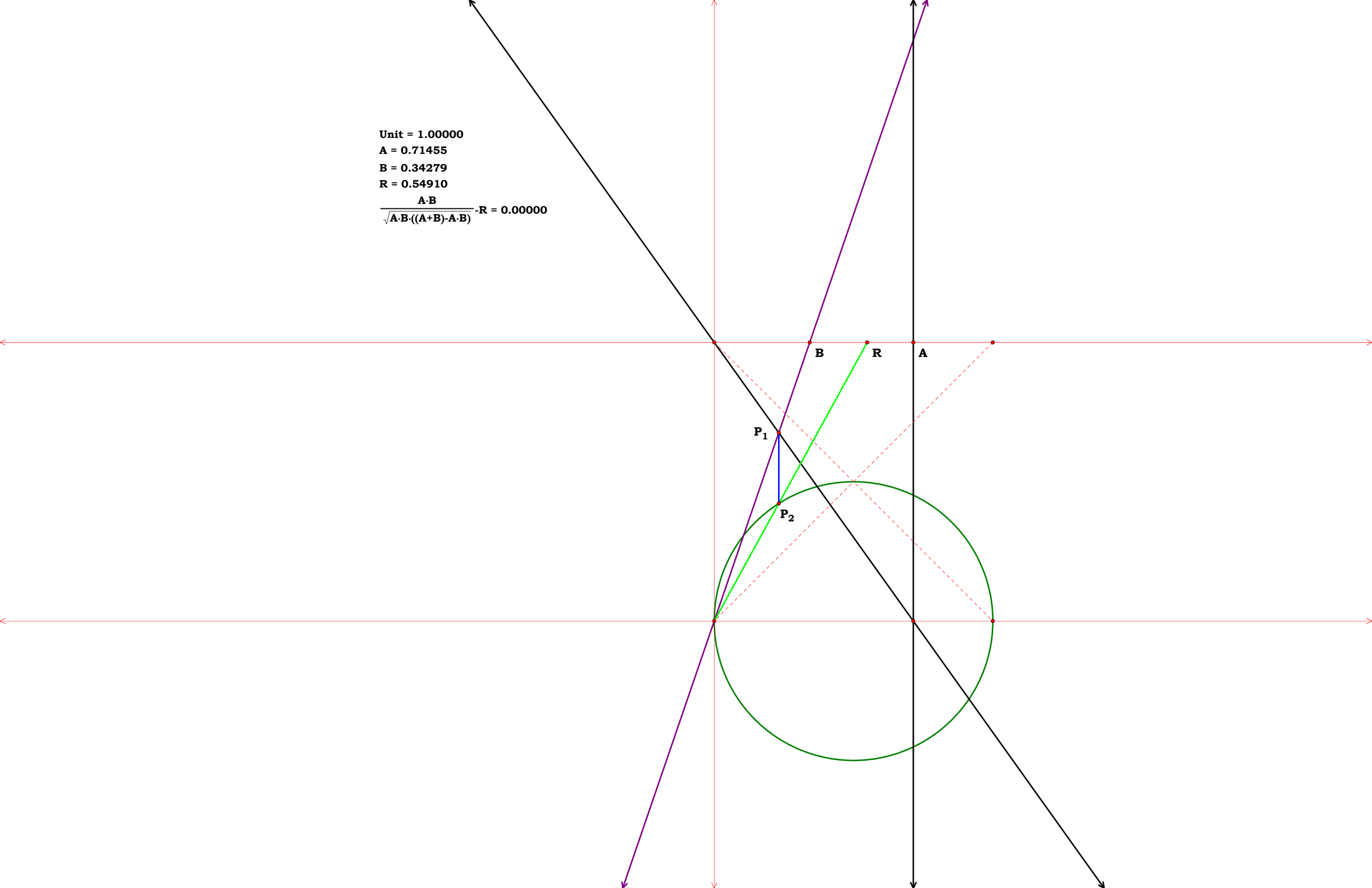
R

A

B

P_2

P_1


Unit = 1.00000
A = 0.71455
B = 0.34279
R = 0.54910
A·B / √(A·B·((A+B)-A·B)) -R = 0.00000
B
R
A
P1
P2

Unit = 1.00000

A = 1.67775

B = 1.26013

C = 0.82801

R = 0.74213

$$\frac{B\cdot C\cdot\sqrt{(A+B)^2}}{(A+B)\cdot\sqrt{B\cdot C\cdot((A+B)-B\cdot C)}}-R = 0.00000$$

R

C

B

A

P_2

P_1

P_3

Unit = 1.00000

A = 0.92216

B = 1.26013

R = 1.81576

$$\frac{(A+B)\cdot\left(\sqrt{B\cdot(A+B)^2}+\sqrt{B^2\cdot(B-A)\cdot(3\cdot A+B)}\right)}{2\cdot A\cdot\sqrt{(B\cdot(A+B))^2}}-R = 0.00000$$

A

B

R

P_1

P_2

Unit = 1.00000

A = 0.49729

B = 0.85457

R = 1.32667

$$\frac{\sqrt{B^2}\cdot(A+B)\cdot\left(\sqrt{(B\cdot(A+B))^2}+\sqrt{B^2\cdot((2\cdot A\cdot B-3\cdot A^2)+B^2)}\right)}{2\cdot B^3\cdot\sqrt{(A+B)^2}}-R = 0.00000$$

A

B

R

P_1

P_2

Unit = 1.00000

A = 0.74352

B = 1.08390

R = 0.35302

$$\frac{(A+B)\cdot\left(\sqrt{(B\cdot(A+B))^2}-\sqrt{B^2\cdot(B-A)\cdot(3\cdot A+B)}\right)}{2\cdot B\cdot\sqrt{(B\cdot(A+B))^2}}-R = 0.00000$$

R

A

B

P_1

P_2

Unit = 1.00000

A = 0.87629

B = 1.34945

R = 0.40939

$$\frac{B\cdot\left(\sqrt{(2\cdot A-3\cdot B)\cdot(B-2\cdot A)}-\sqrt{B^2}\right)}{2\cdot\sqrt{B^2}\cdot(A-B)}-R = 0.00000$$

R

A

B

P_2

P_1

Unit = 1.00000

A = 0.85940

B = 1.68982

R = 1.20503

$$\frac{B\cdot\left(\sqrt{B^2}+\sqrt{(2\cdot A-3\cdot B)\cdot(B-2\cdot A)}\right)}{2\cdot\sqrt{B^2}\cdot(B-A)}-R = 0.00000$$

A

R

B

P_1

P_2

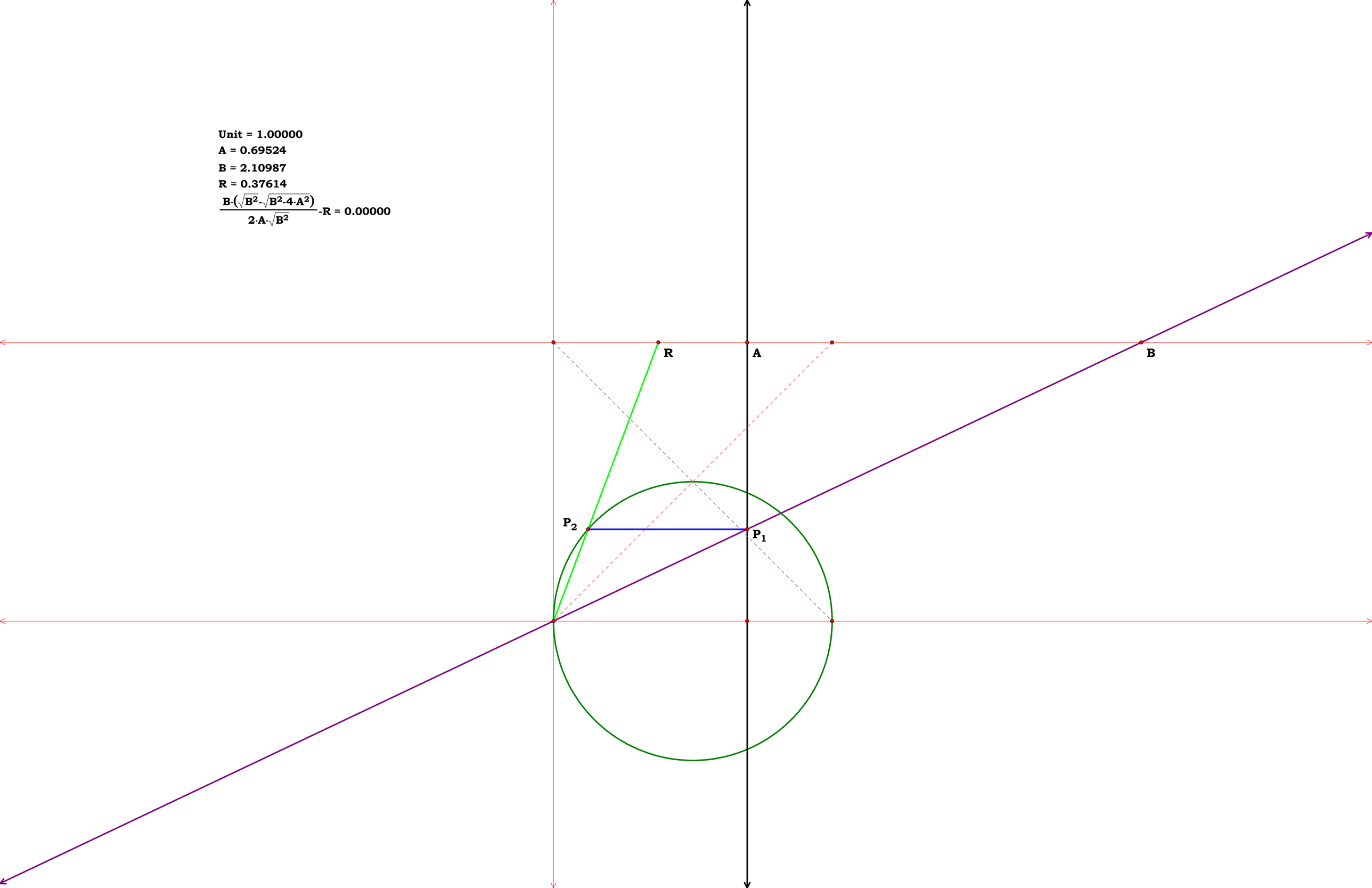
Unit = 1.00000

A = 0.69524

B = 2.10987

R = 0.37614

$$\frac{B\cdot\left(\sqrt{B^2}-\sqrt{B^2-4\cdot A^2}\right)}{2\cdot A\cdot\sqrt{B^2}}-R = 0.00000$$



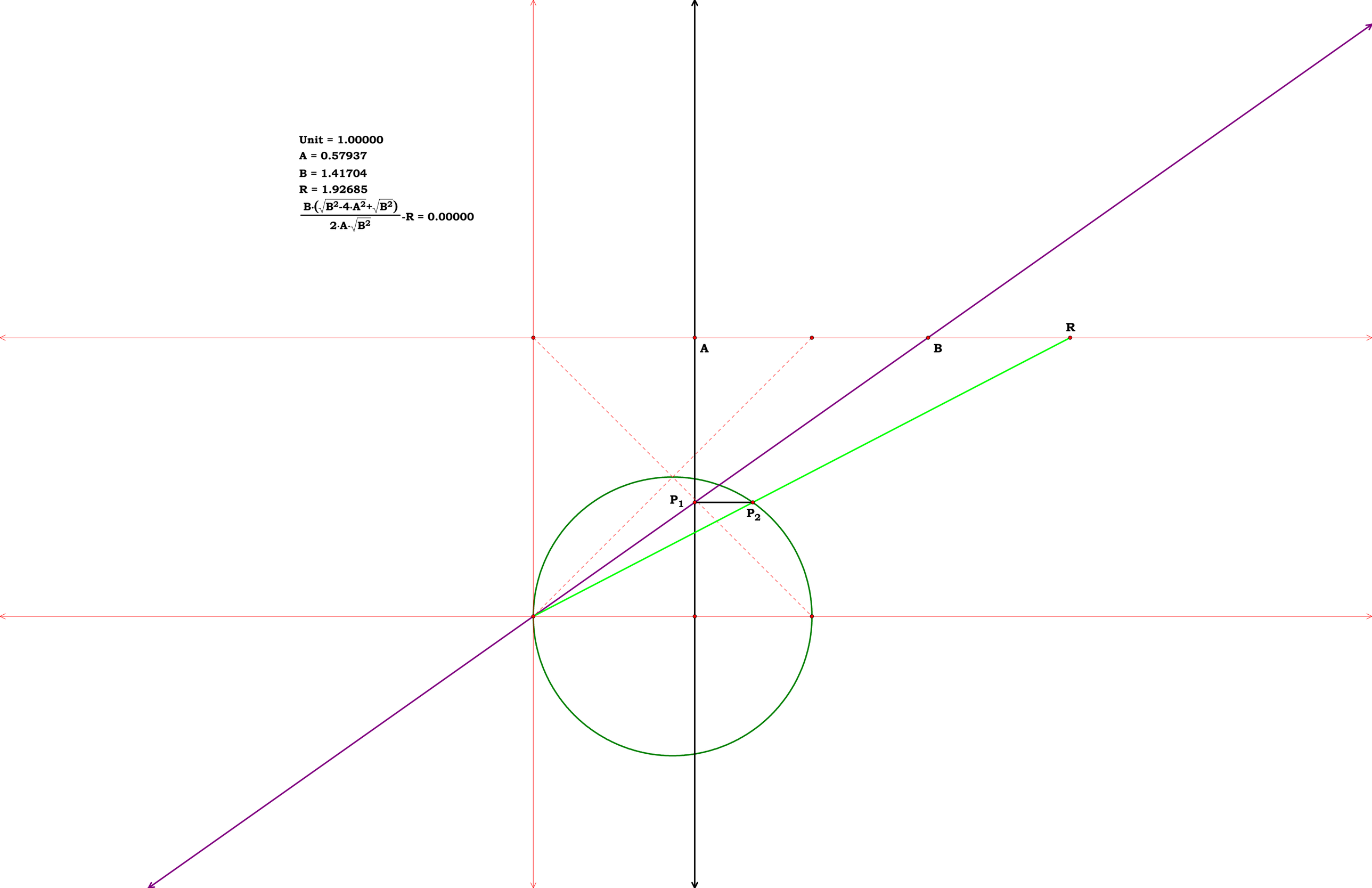
Unit = 1.00000

A = 0.57937

B = 1.41704

R = 1.92685

$$\frac{B\cdot\left(\sqrt{B^2-4\cdot A^2}+\sqrt{B^2}\right)}{2\cdot A\cdot\sqrt{B^2}}-R = 0.00000$$



Branch One.

Introduction to Roll Away the Stone.

Motions in Roll Away the Stone.

Using a six sample set.

Given.

$A := .31382$

$B := .19312$

Descriptions.

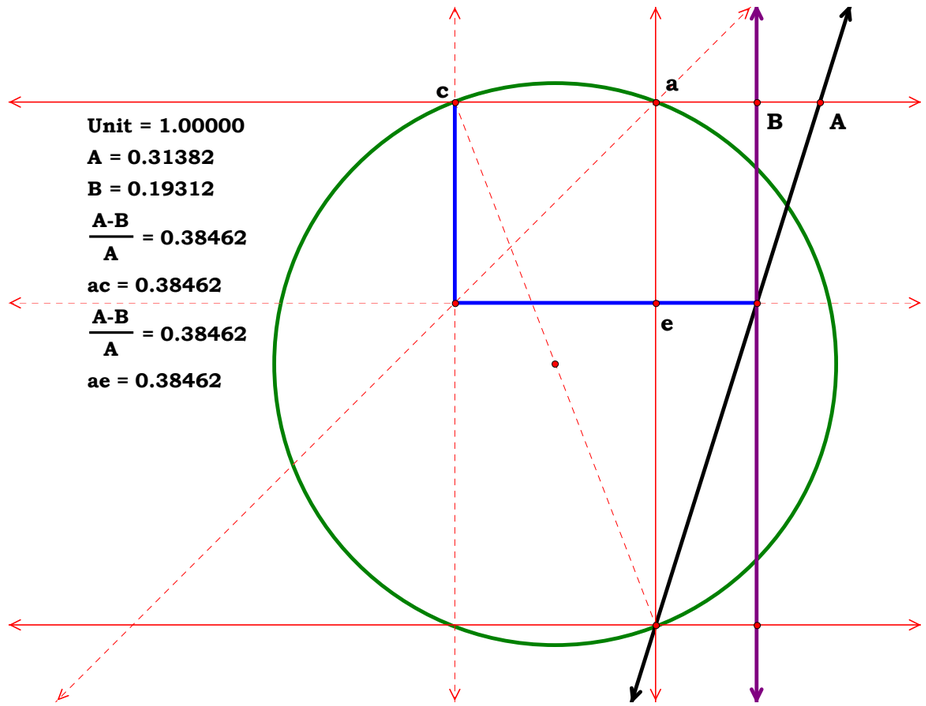
One can tie the circles motion to any equation that they like. This is just a sample set of six simple motions.

The previous sections of the book use variables throughout the equation which are arithmetic. Here I use a geometric variable commonly called a function. I do not use the clumsy notation for a function, its is, after all, just another variable. I simply use ac inthe equation.

Definitions.

$ac := \frac{A - B}{A}$ $ac = 0.384615$

$ae := \frac{A - B}{A}$ $ae = 0.384615$



Branch Two.

Given.

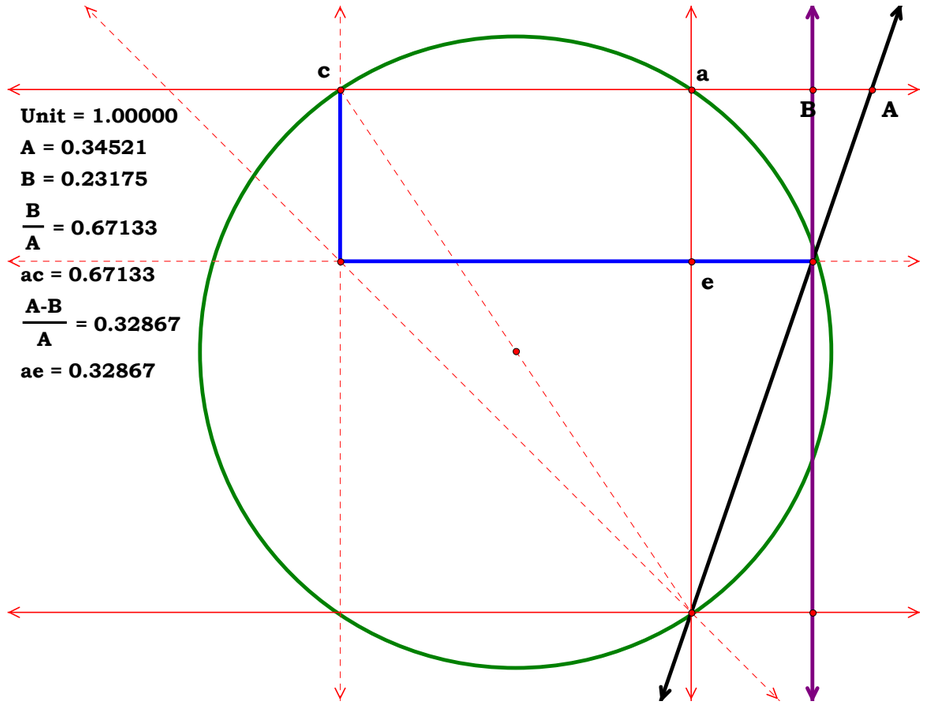
$A := .34521$

$B := .23175$

Definitions.

$ac := \frac{B}{A}$ $\quad ac = 0.67133$

$ae := \frac{A - B}{A}$ $\quad ae = 0.32867$



Branch Three.

Given.

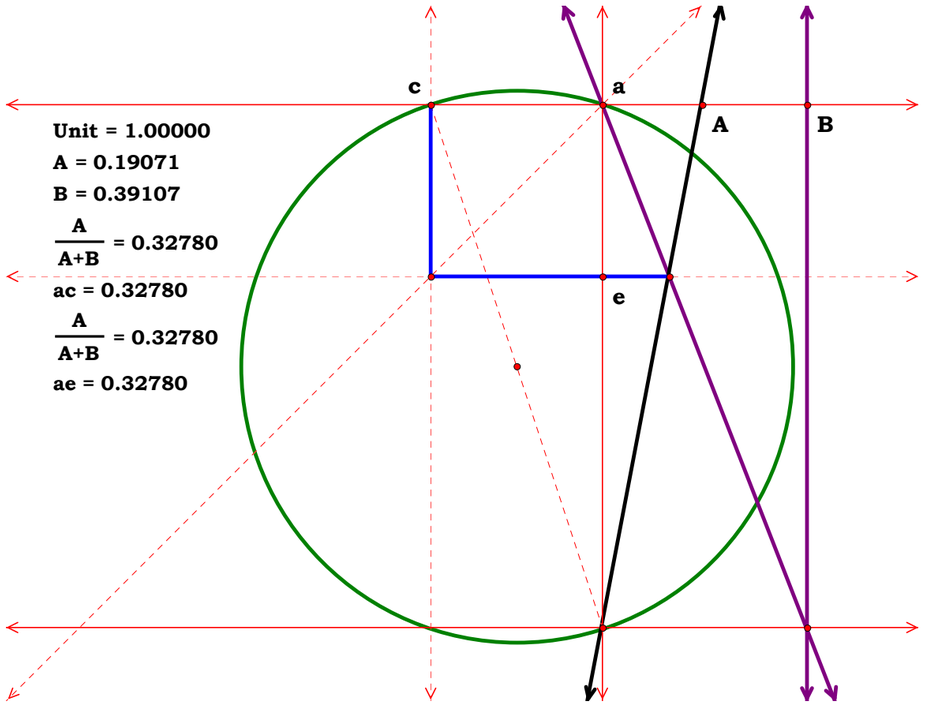
$A := .19071$

$B := .39107$

Definitions.

$ac := \frac{A}{A+B}$ $\quad ac = 0.327804$

$ae := \frac{A}{A+B}$ $\quad ae = 0.327804$



Branch Four.

Given.

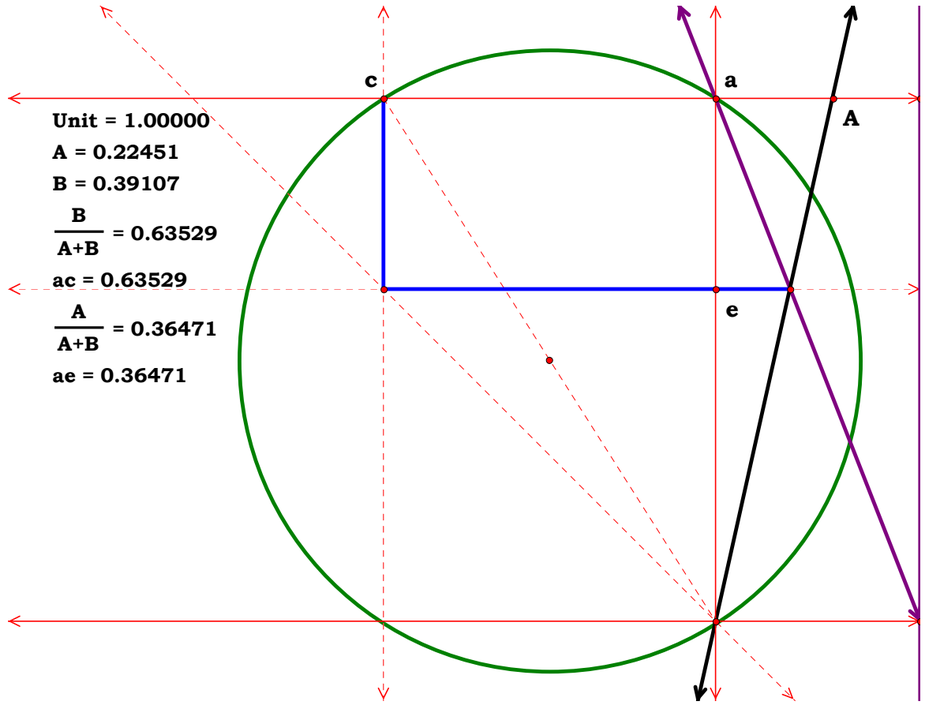
$A := .22451$

$B := .39107$

Definitions.

$$ac := \frac{B}{A+B} \qquad ac = 0.635287$$

$$ae := \frac{A}{A+B} \qquad ae = 0.364713$$



Branch Five.

Given.

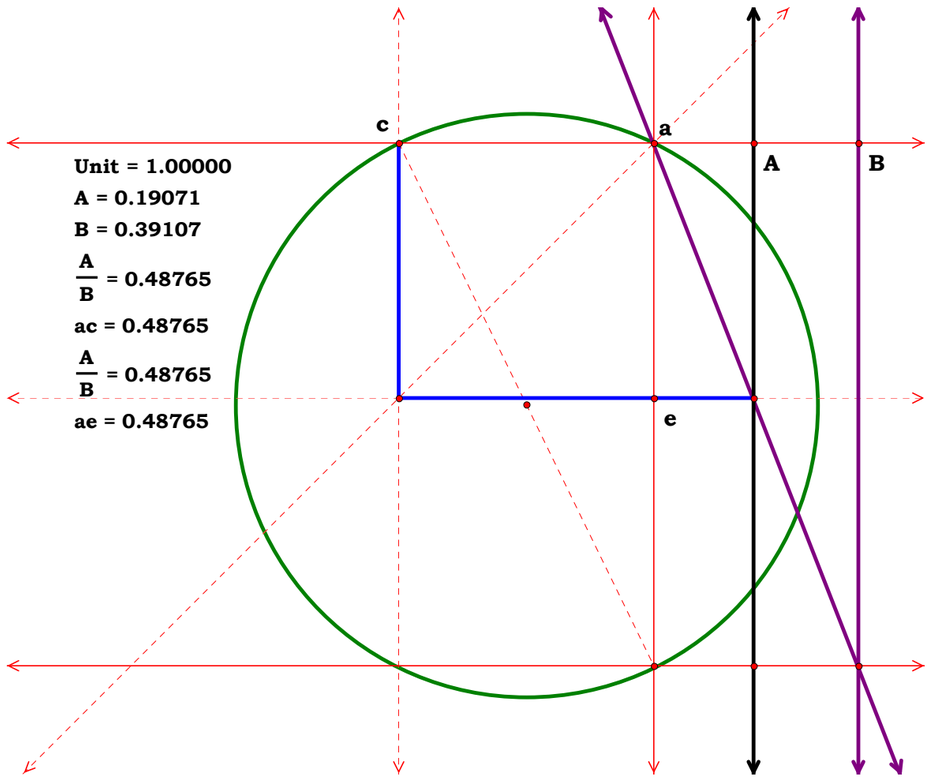
$A := .19071$

$B := .39107$

Definitions.

$ac := \frac{A}{B}$ $\quad ac = 0.487662$

$ae := \frac{A}{B}$ $\quad ae = 0.487662$



Branch Six.

Given.

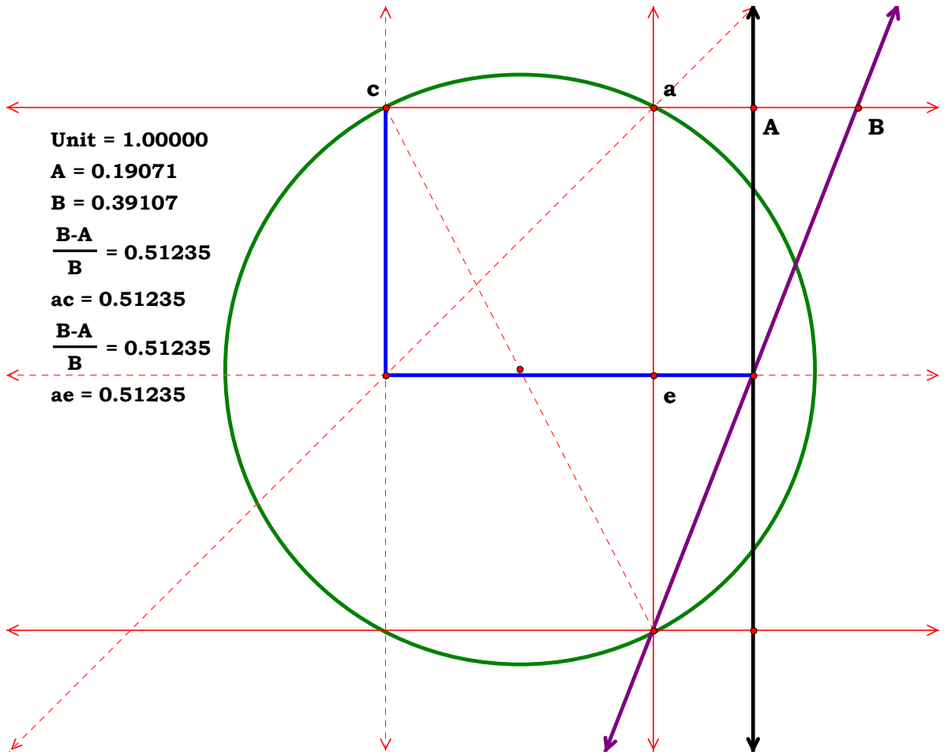
A := .19071

B := .39107

Definitions.

$$\mathbf{ac} := \frac{\mathbf{B} - \mathbf{A}}{\mathbf{B}} \qquad \mathbf{ac} = 0.512338$$

$$\mathbf{ae} := \frac{\mathbf{B} - \mathbf{A}}{\mathbf{B}} \qquad \mathbf{ae} = 0.512338$$



Unit = 1.00000

A = 0.83526

B = 0.57695

C = 1.14667

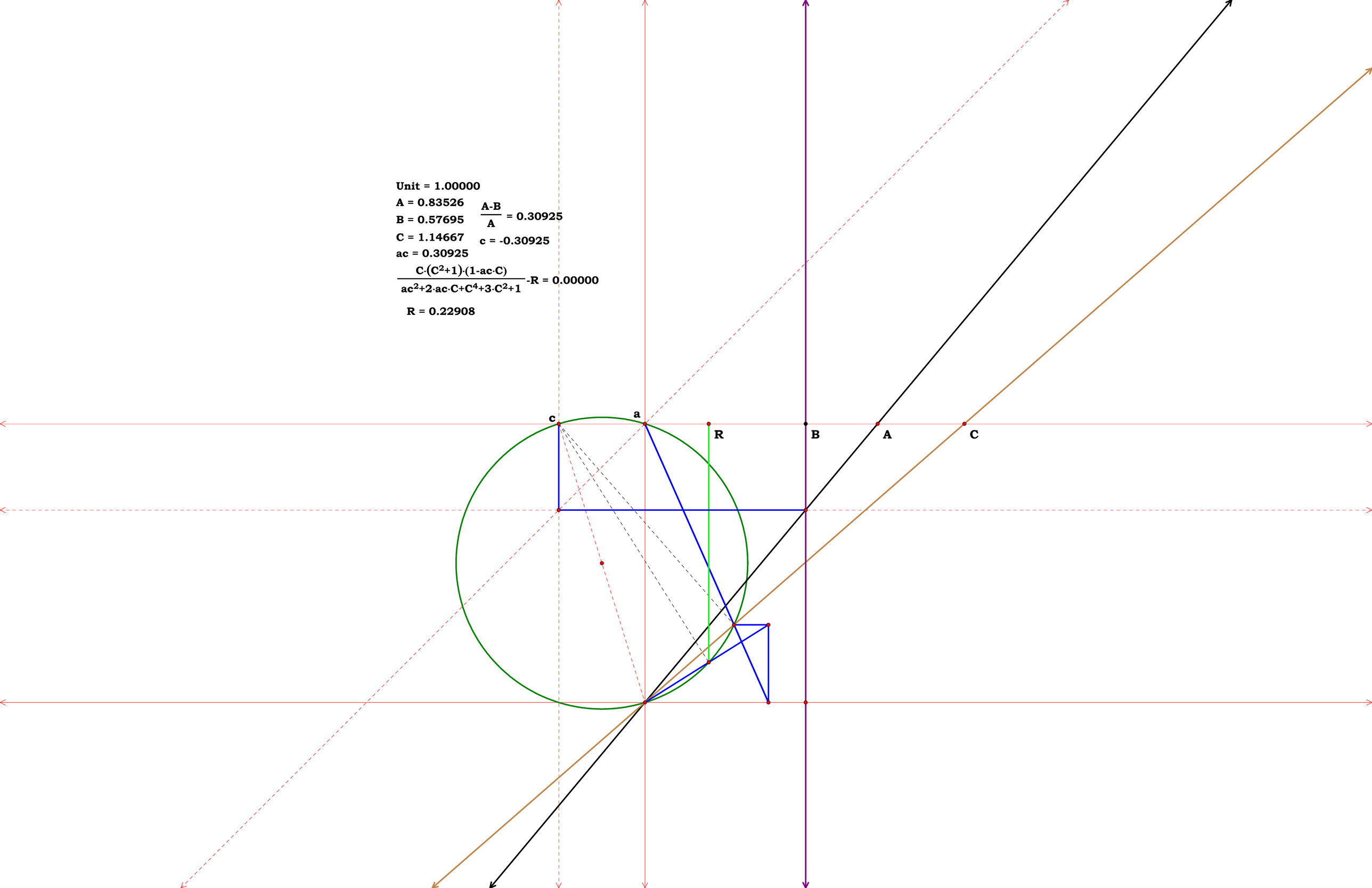
ac = 0.30925

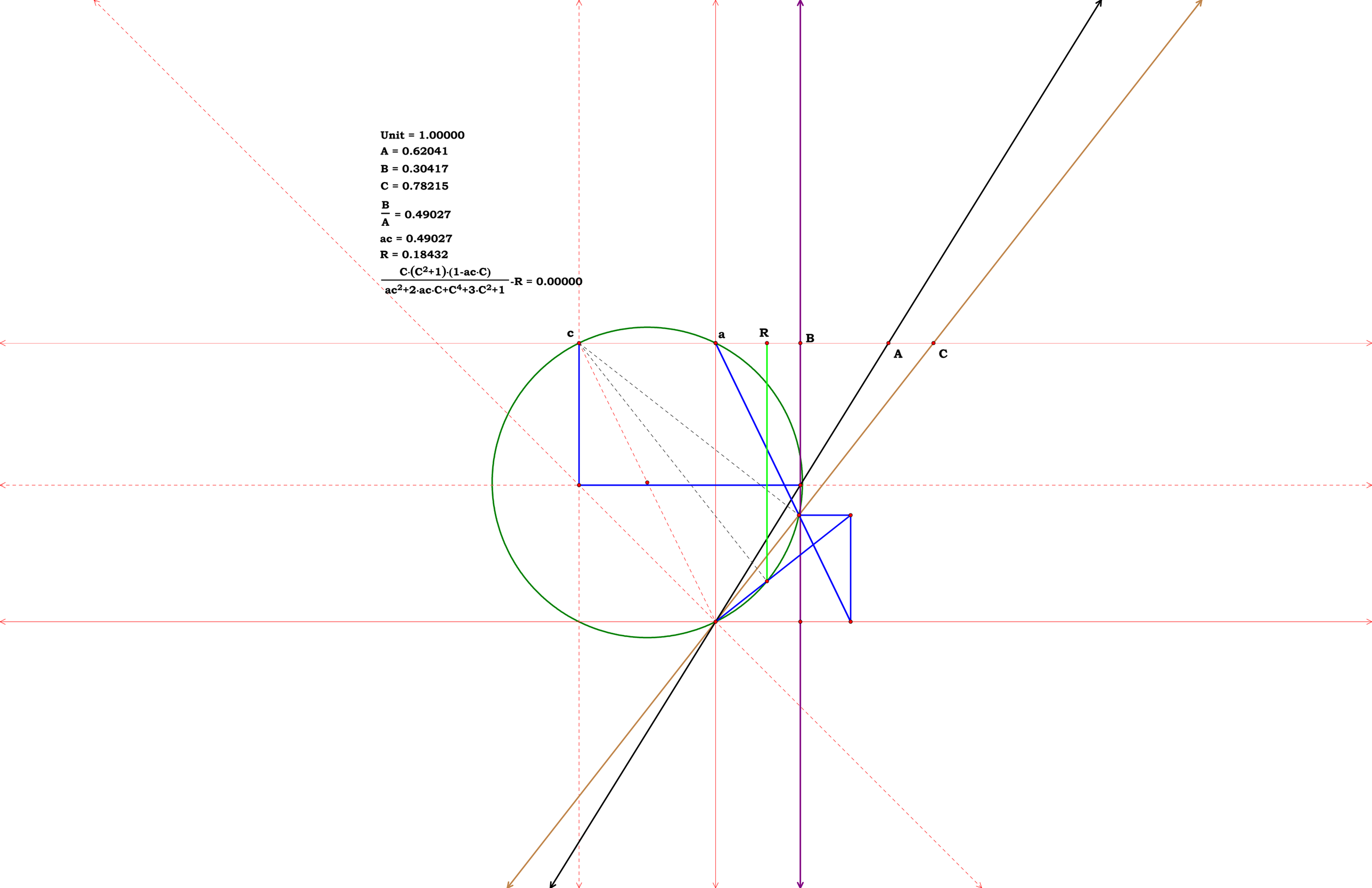
$\frac{A-B}{A}$ = 0.30925

c = -0.30925

$\frac{C\cdot(C^2+1)\cdot(1-ac\cdot C)}{ac^2+2\cdot ac\cdot C+C^4+3\cdot C^2+1}$ -R = 0.00000

R = 0.22908




Unit = 1.00000
A = 0.62041
B = 0.30417
C = 0.78215
B/A = 0.49027
ac = 0.49027
R = 0.18432
C·(C²+1)·(1-ac·C) / (ac²+2·ac·C+C⁴+3·C²+1) -R = 0.00000
c
a
R
B
A
C

Unit = 1.00000

A = 1.56430

B = 1.06700

C = 0.73628

$\frac{A}{A+B}$ = 0.59450

ac = 0.59450

R = 0.15387

$\frac{C\cdot(C^2+1)\cdot(1-ac\cdot C)}{ac^2+2\cdot ac\cdot C+C^4+3\cdot C^2+1}$ -R = 0.00000

c

a

R

C

B

A

Unit = 1.00000

A = 0.27761

B = 0.41763

C = 0.63731

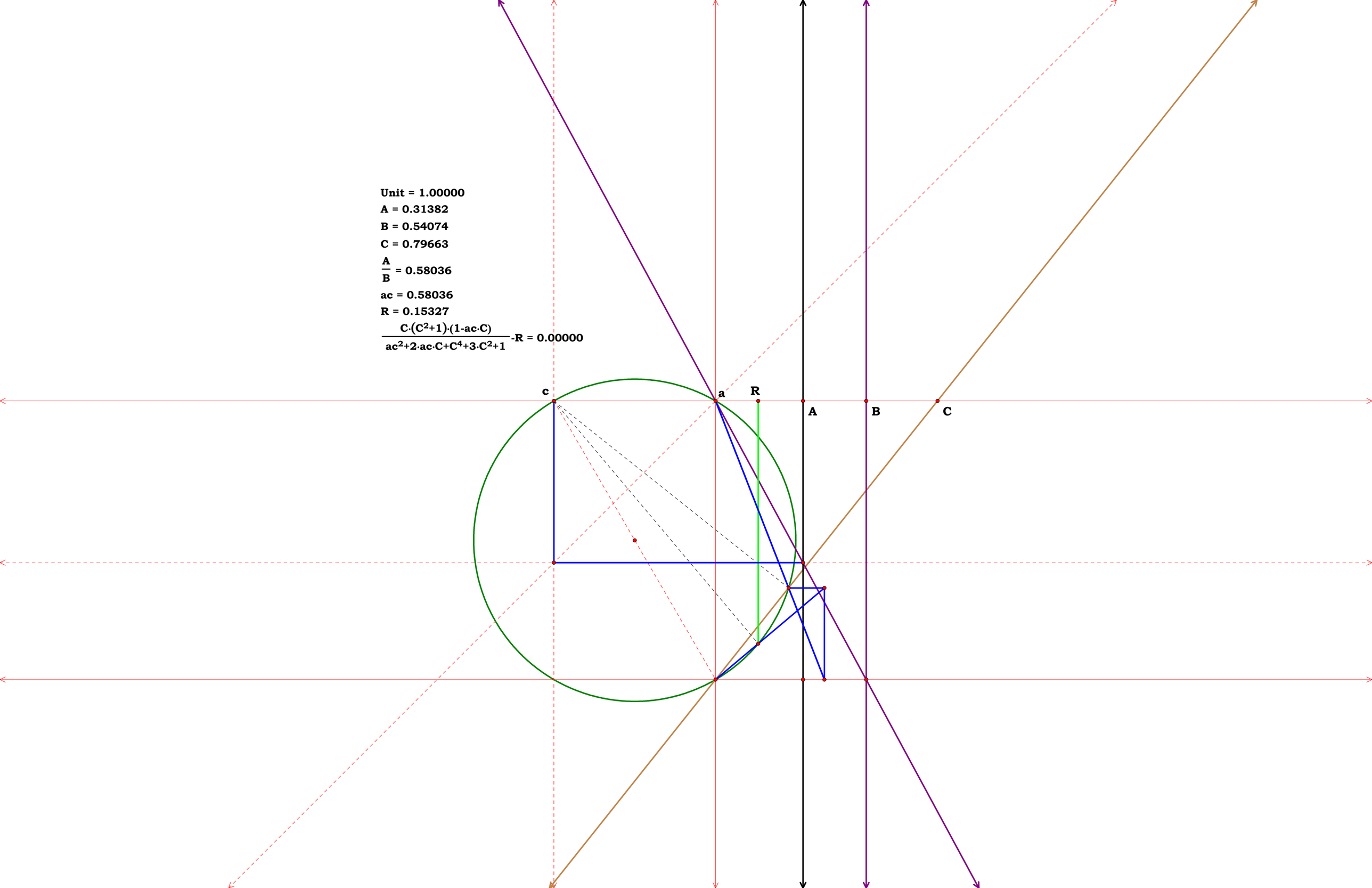
$\frac{B}{A+B}$ = 0.60069

ac = 0.60069

R = 0.15758

$\frac{C\cdot(C^2+1)\cdot(1-ac\cdot C)}{ac^2+2\cdot ac\cdot C+C^4+3\cdot C^2+1}$ -R = 0.00000

c a R A B C


Unit = 1.00000
A = 0.31382
B = 0.54074
C = 0.79663
A/B = 0.58036
ac = 0.58036
R = 0.15327
C·(C²+1)·(1-ac·C) / (ac²+2·ac·C+C⁴+3·C²+1) -R = 0.00000
c
a
R
A
B
C

Unit = 1.00000

A = 0.24140

B = 0.41280

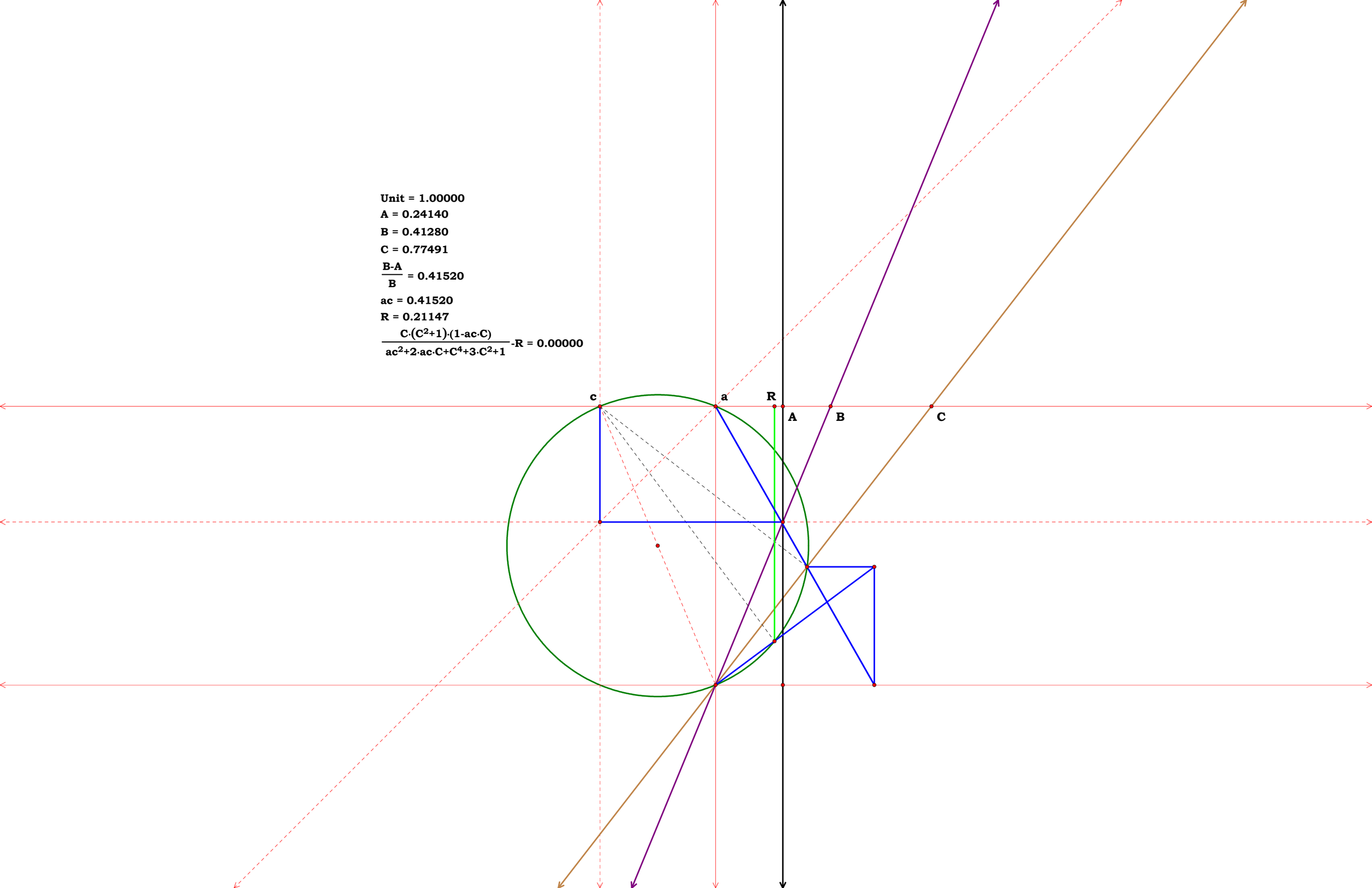
C = 0.77491

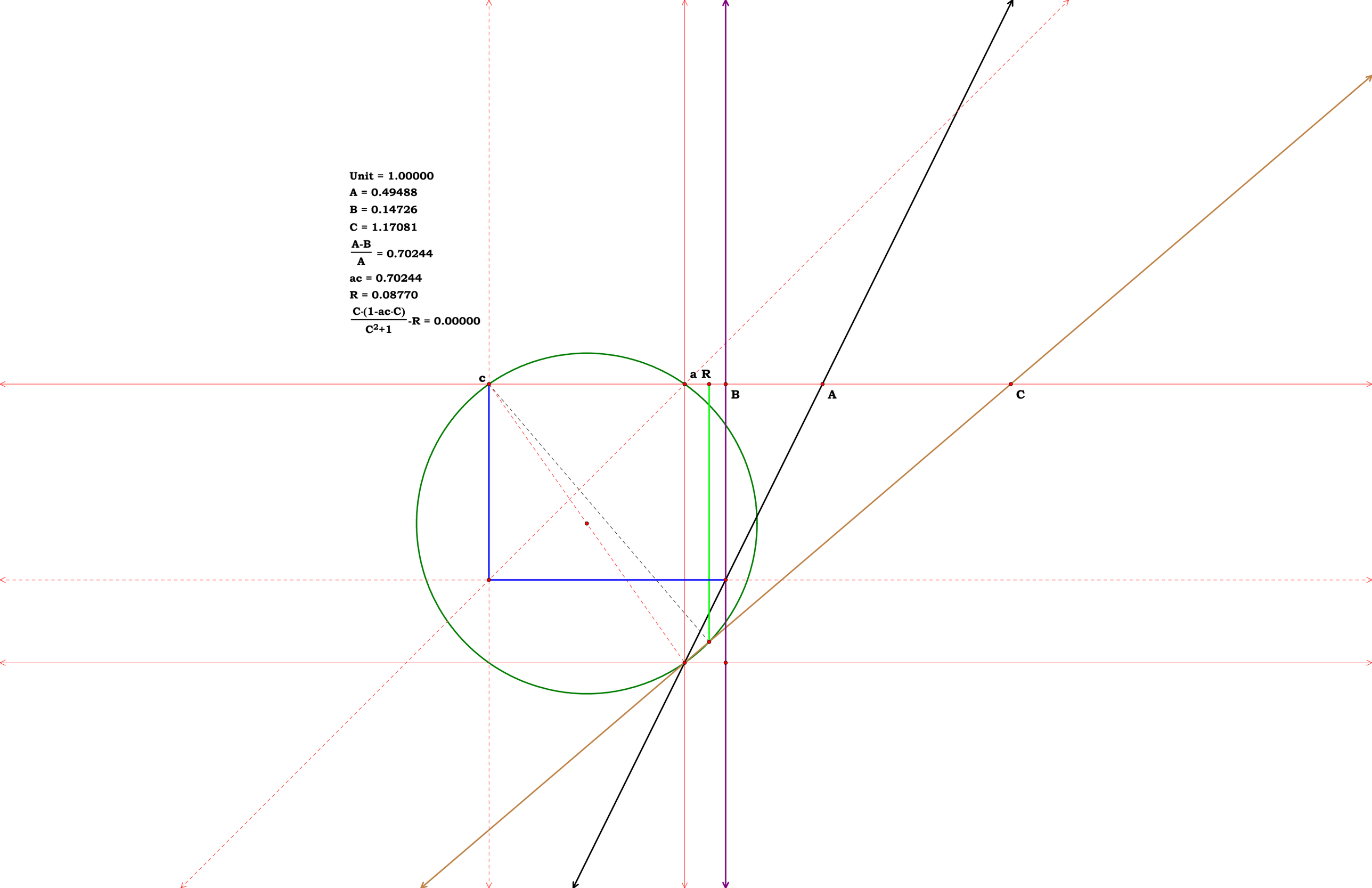
$\frac{B-A}{B}$ = 0.41520

ac = 0.41520

R = 0.21147

$\frac{C\cdot(C^2+1)\cdot(1-ac\cdot C)}{ac^2+2\cdot ac\cdot C+C^4+3\cdot C^2+1}$ -R = 0.00000




Unit = 1.00000
A = 0.49488
B = 0.14726
C = 1.17081
(A-B)/A = 0.70244
ac = 0.70244
R = 0.08770
C·(1-ac·C)/(C²+1) -R = 0.00000
c
a
R
B
A
C

Unit = 1.00000

A = 0.52143

B = 0.16657

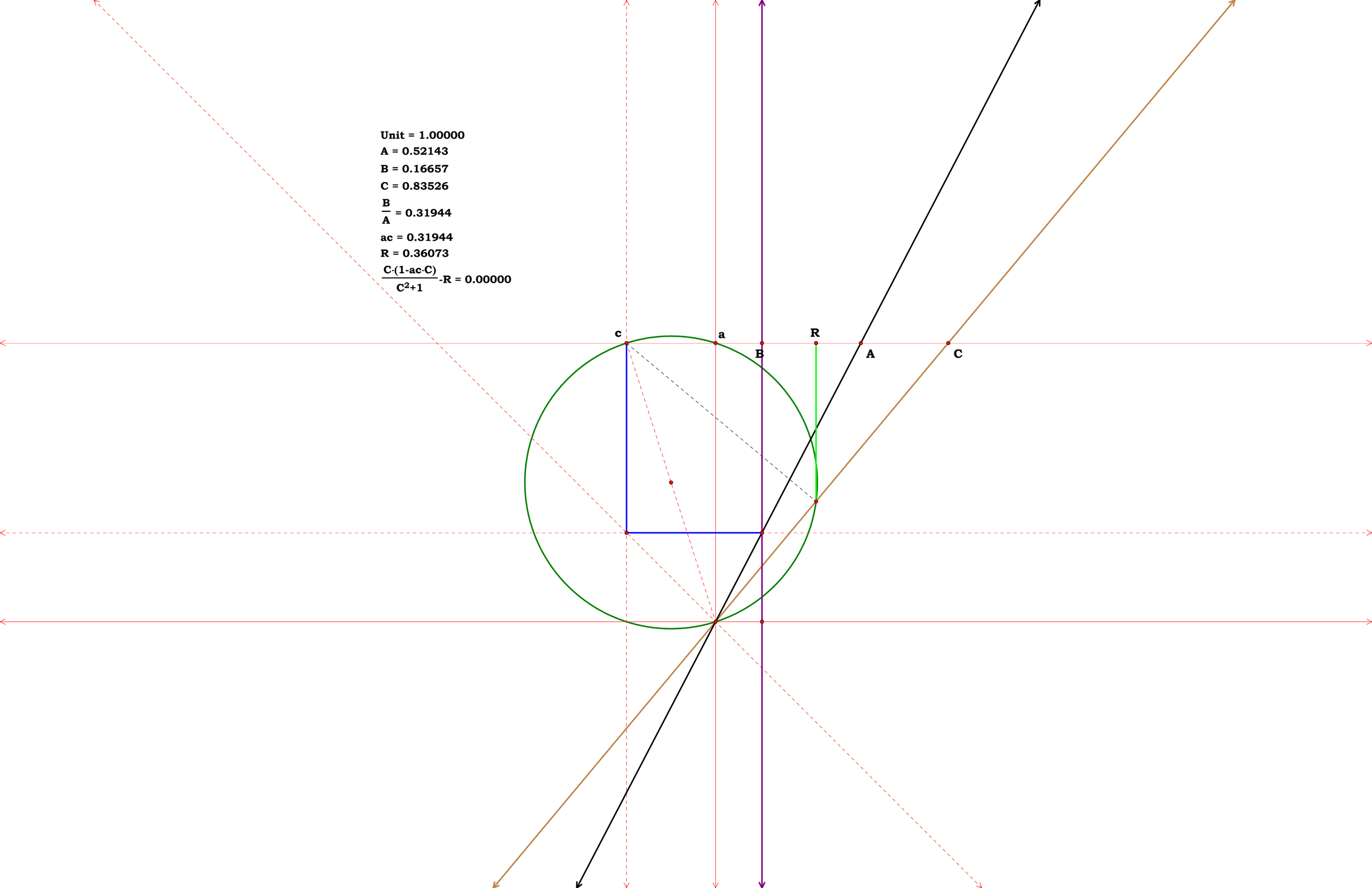
C = 0.83526

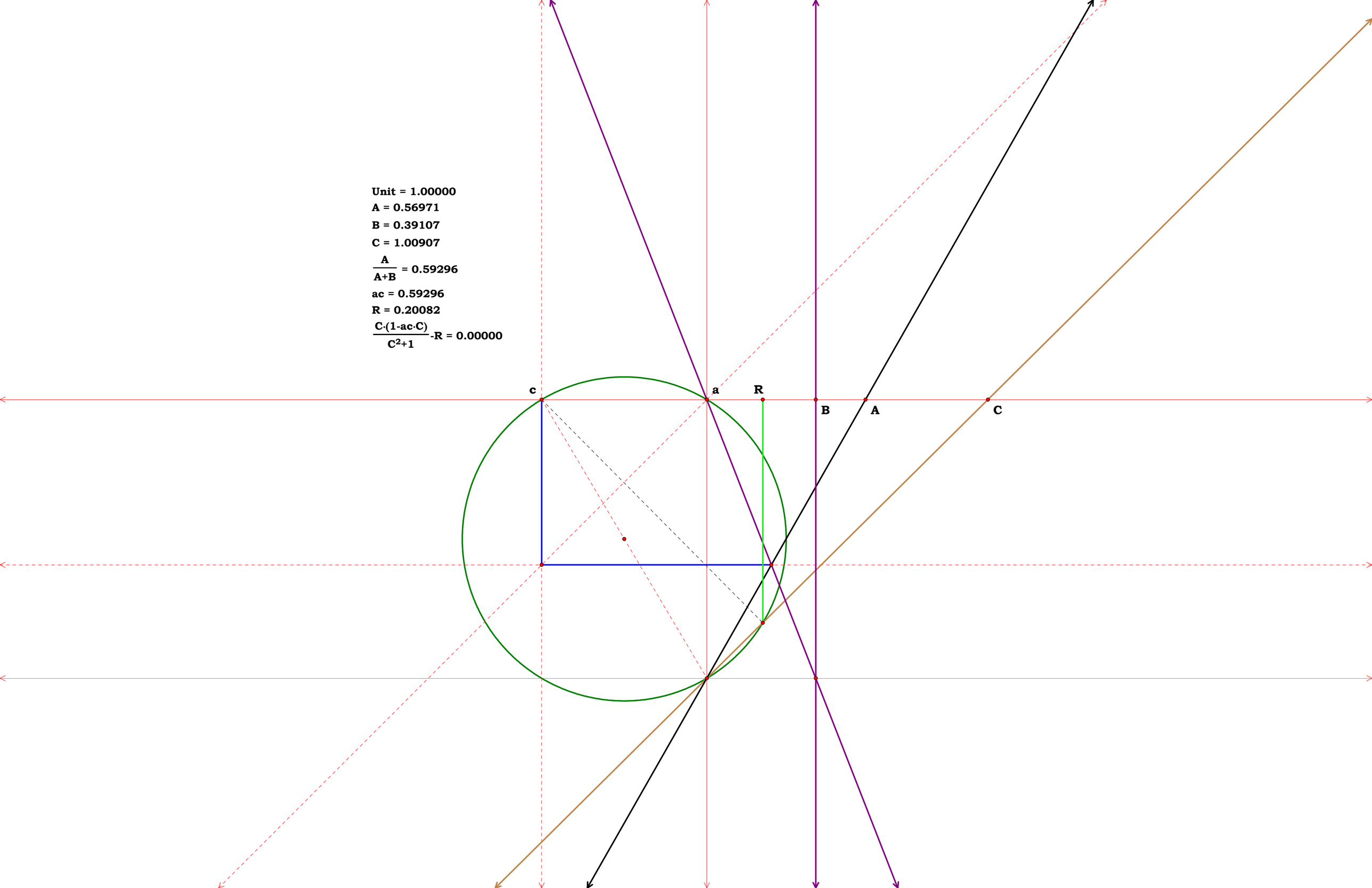
$\frac{B}{A}$ = 0.31944

ac = 0.31944

R = 0.36073

$\frac{C\cdot(1-ac\cdot C)}{C^2+1}$-R = 0.00000




Unit = 1.00000
A = 0.56971
B = 0.39107
C = 1.00907
A/(A+B) = 0.59296
ac = 0.59296
R = 0.20082
C·(1-ac·C)/(C²+1) -R = 0.00000
c
a
R
B
A
C

Unit = 1.00000

A = 0.36211

B = 0.54316

C = 1.11770

$\frac{B}{A+B}$ = 0.60000

ac = 0.60000

R = 0.16368

$\frac{C\cdot(1-ac\cdot C)}{C^2+1}$-R = 0.00000

c

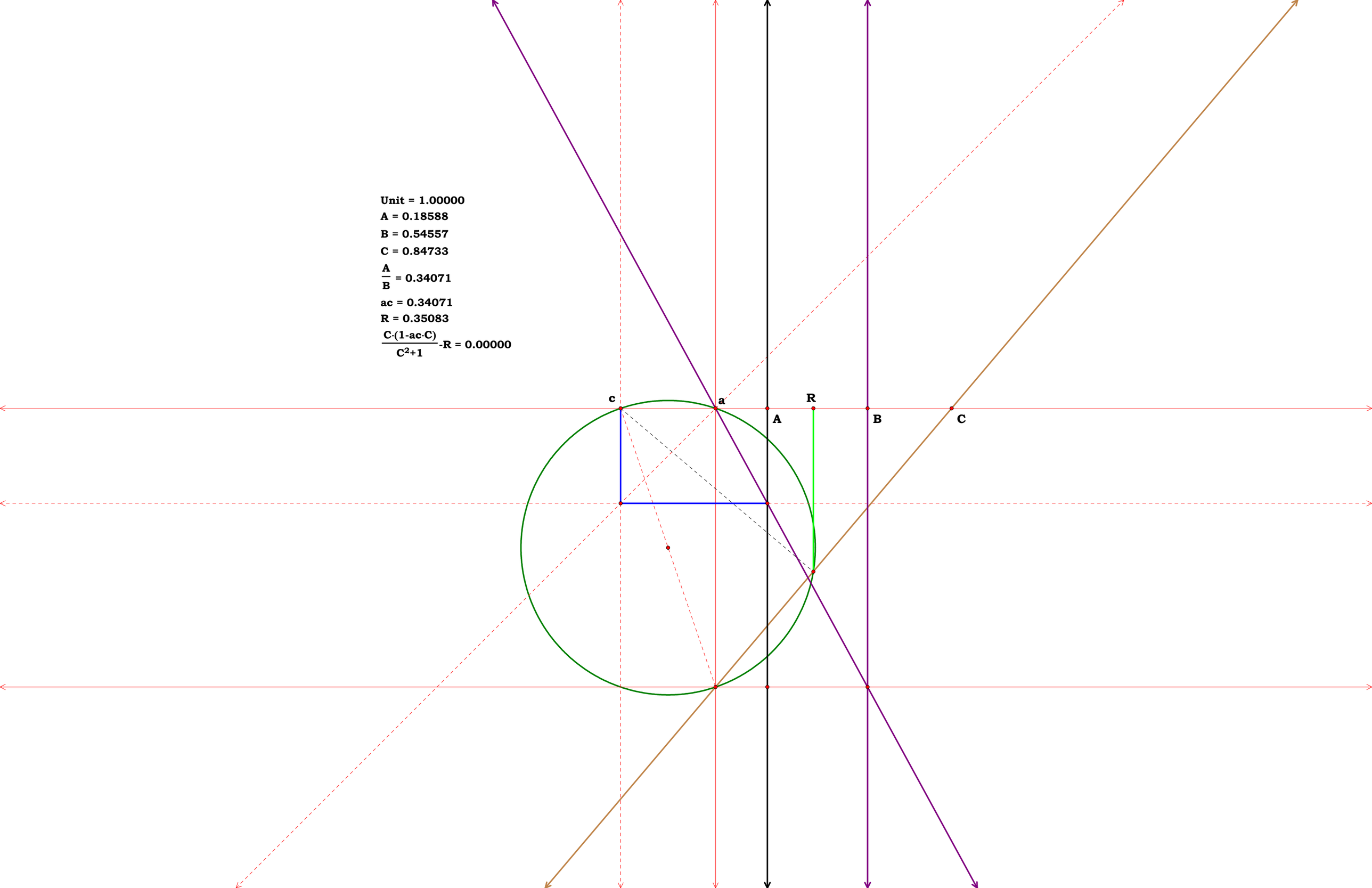
a

R

A

B

C


Unit = 1.00000
A = 0.18588
B = 0.54557
C = 0.84733
A/B = 0.34071
ac = 0.34071
R = 0.35083
C·(1-ac·C)/(C²+1) -R = 0.00000
c
a
R
A
B
C

Unit = 1.00000

A = 0.22209

B = 0.36935

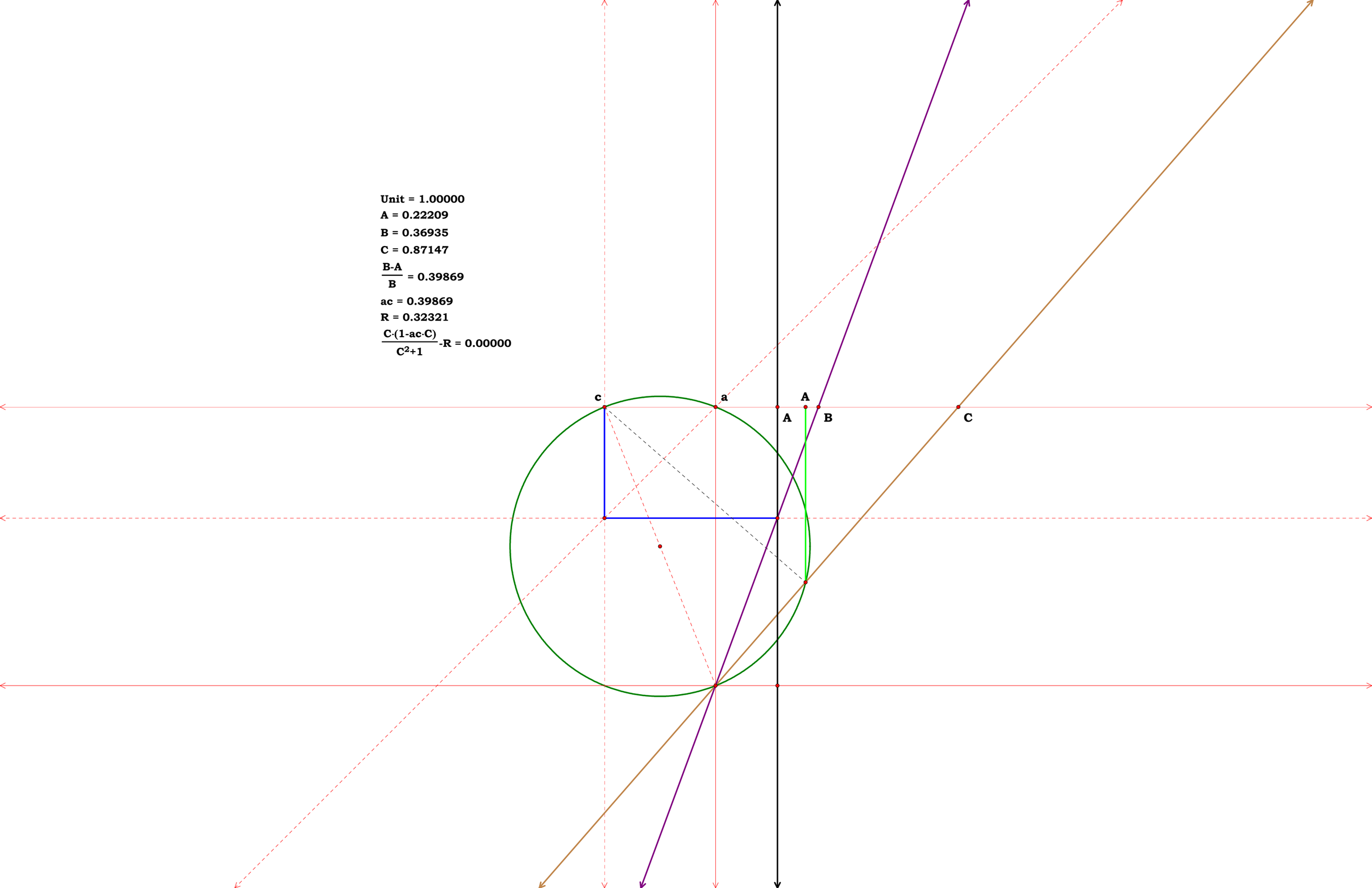
C = 0.87147

$\frac{B-A}{B}$ = 0.39869

ac = 0.39869

R = 0.32321

$\frac{C\cdot(1-ac\cdot C)}{C^2+1}$-R = 0.00000



Unit = 1.00000

A = 0.63006

B = 0.33555

C = 1.35427

D = 1.06700

$\frac{A-B}{A}$ = 0.46743

ac = 0.46743

R = 0.28215

$\frac{C\cdot D\cdot(ac+C)\cdot((C^2-ac\cdot C^2\cdot D-ac^2\cdot C\cdot D)+1)}{ac^2\cdot C^2\cdot D^2+2\cdot ac\cdot C^3\cdot D^2+C^4\cdot D^2+C^4+2\cdot C^2+1}$-R = 0.00000

c

a

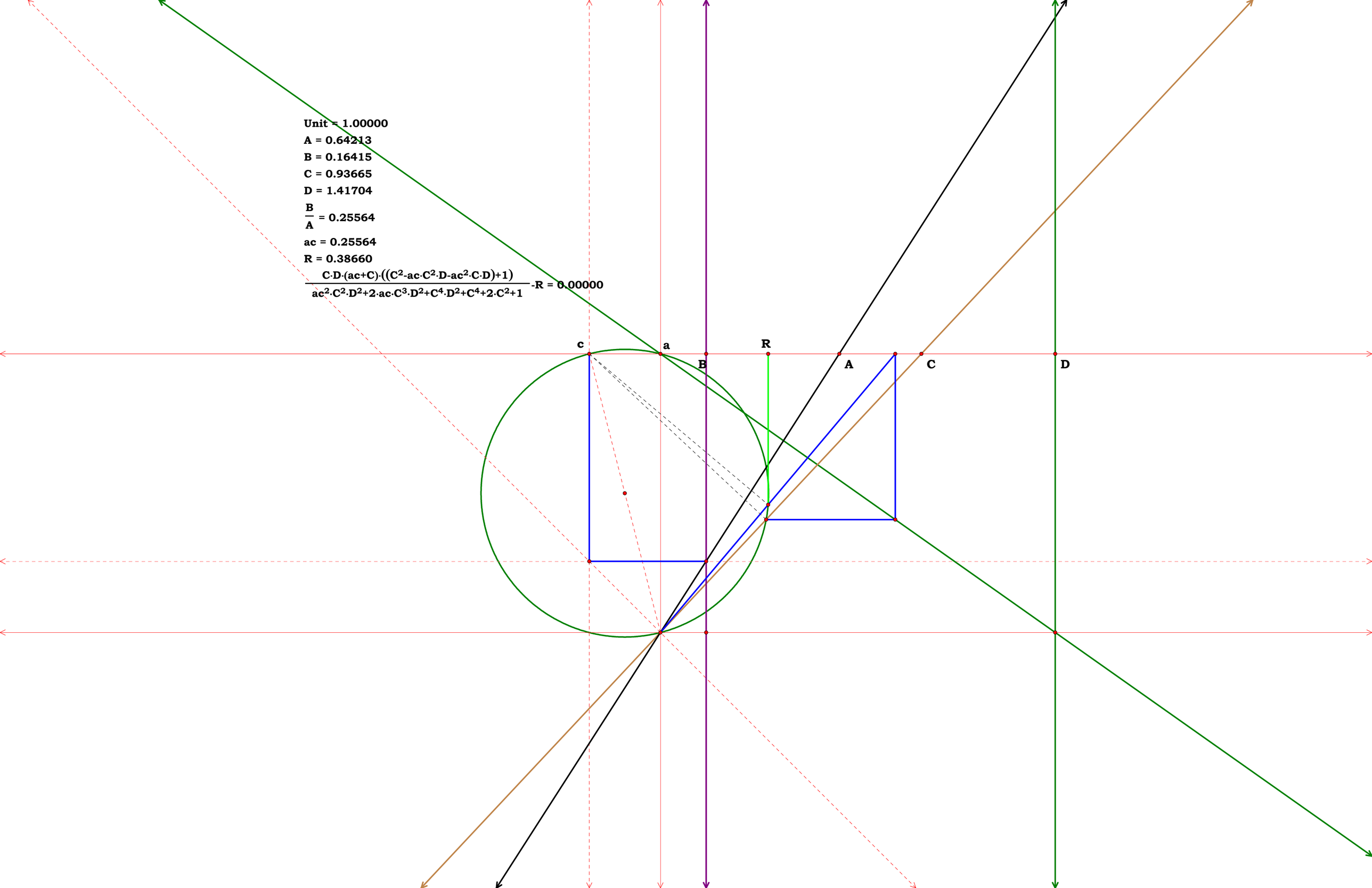
R

B

A

D

C


Unit = 1.00000
A = 0.64213
B = 0.16415
C = 0.93665
D = 1.41704
B/A = 0.25564
ac = 0.25564
R = 0.38660
C·D·(ac+C)·((C²-ac·C²·D-ac²·C·D)+1) / (ac²·C²·D²+2·ac·C³·D²+C⁴·D²+C⁴+2·C²+1) -R = 0.00000
c
a
B
R
A
C
D

Unit = 1.00000

A = 0.21244

B = 0.47557

C = 0.90044

D = 1.26978

$\frac{A}{A+B}$ = 0.30877

ac = 0.30877

R = 0.36862

$\frac{C \cdot D \cdot (ac+C) \cdot ((C^2 - ac \cdot C^2 \cdot D - ac^2 \cdot C \cdot D)+1)}{ac^2 \cdot C^2 \cdot D^2 + 2 \cdot ac \cdot C^3 \cdot D^2 + C^4 \cdot D^2 + C^4 + 2 \cdot C^2 + 1}$ - R = 0.00000

c

a

R

A

B

C

D

Unit = 1.00000

A = 0.33314

B = 0.49005

C = 0.72662

D = 1.31324

$\frac{B}{A+B} = 0.59531$

ac = 0.59531

R = 0.24967

$\frac{C \cdot D \cdot (ac+C) \cdot ((C^2 - ac \cdot C^2 \cdot D - ac^2 \cdot C \cdot D)+1)}{ac^2 \cdot C^2 \cdot D^2 + 2 \cdot ac \cdot C^3 \cdot D^2 + C^4 \cdot D^2 + C^4 + 2 \cdot C^2 + 1} - R = 0.00000$

c

a

R

A

B

C

D

Unit = 1.00000

A = 0.20278

B = 0.48522

C = 0.84733

D = 1.23357

$\frac{A}{B}$ = 0.41791

ac = 0.41791

R = 0.32786

$\frac{C \cdot D \cdot (ac+C) \cdot ((C^2 - ac \cdot C^2 \cdot D - ac^2 \cdot C \cdot D)+1)}{ac^2 \cdot C^2 \cdot D^2 + 2 \cdot ac \cdot C^3 \cdot D^2 + C^4 \cdot D^2 + C^4 + 2 \cdot C^2 + 1}$ - R = 0.00000

c

a

A

R

B

C

D

Unit = 1.00000

A = 0.23175

B = 0.44418

C = 0.77491

D = 1.20702

$\frac{B-A}{B} = 0.47826$

ac = 0.47826

R = 0.30972

$\frac{C \cdot D \cdot (ac+C) \cdot ((C^2 - ac \cdot C^2 \cdot D - ac^2 \cdot C \cdot D)+1)}{ac^2 \cdot C^2 \cdot D^2 + 2 \cdot ac \cdot C^3 \cdot D^2 + C^4 \cdot D^2 + C^4 + 2 \cdot C^2 + 1} - R = 0.00000$

c

a

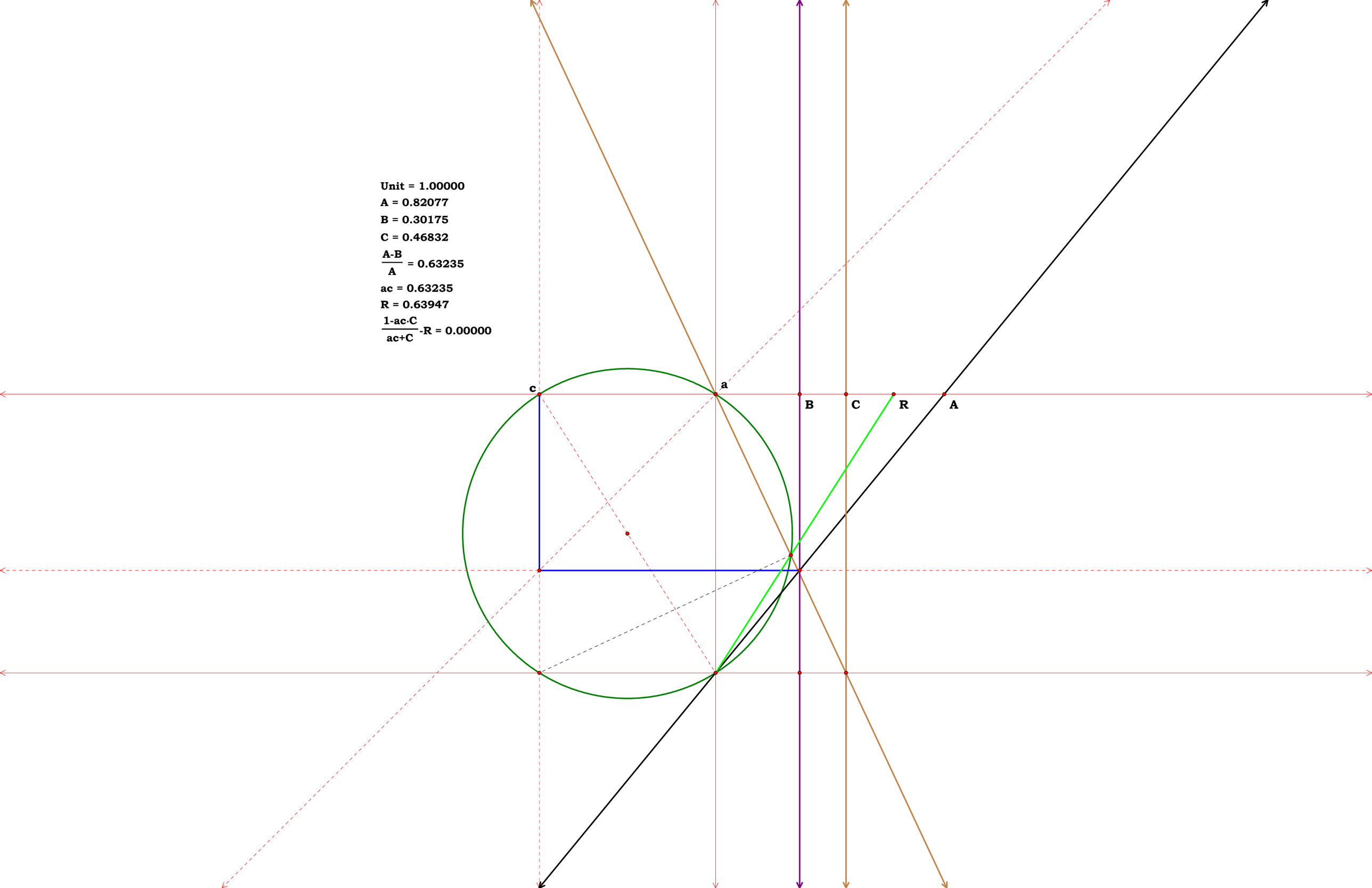
R

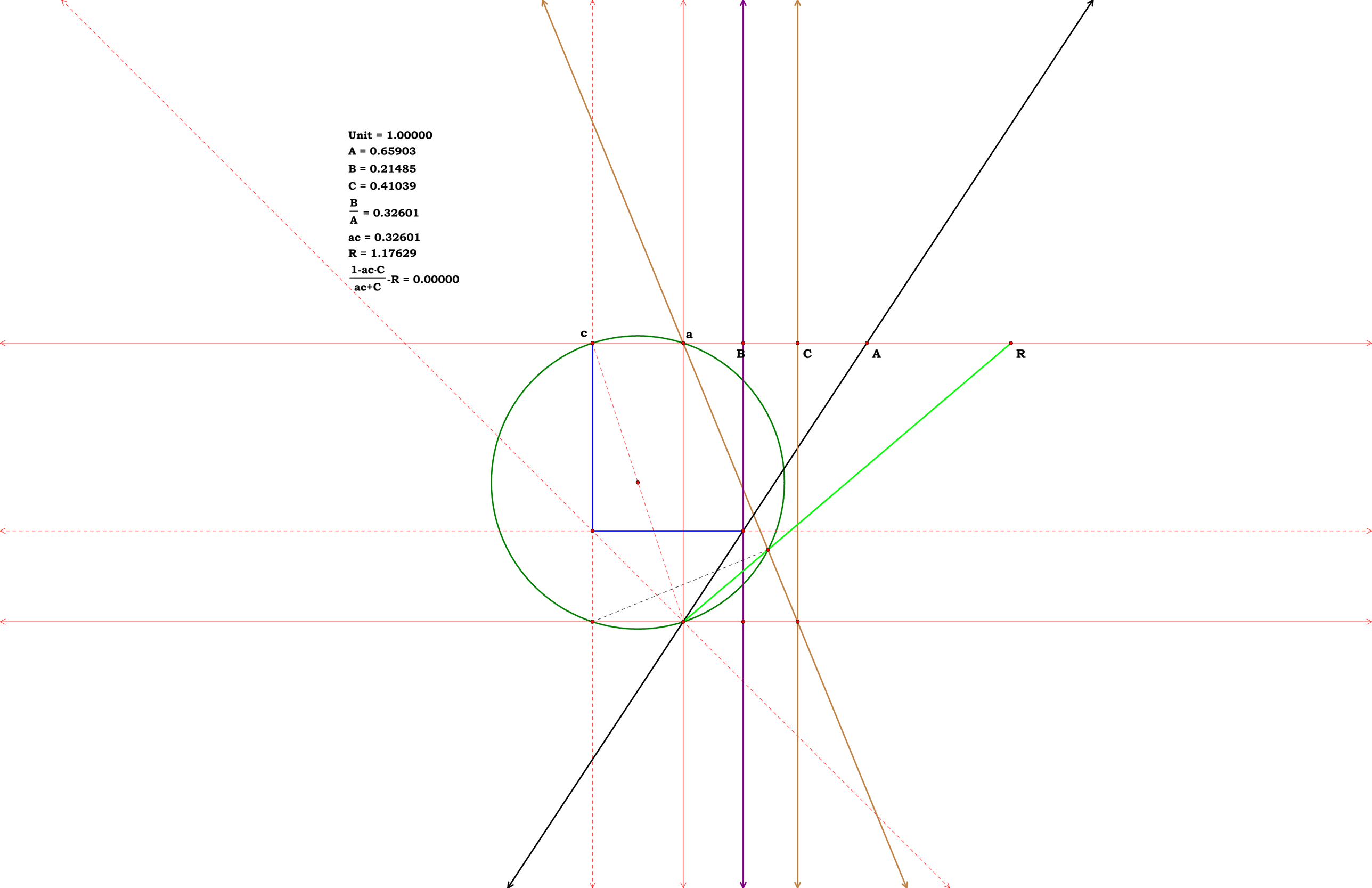
A

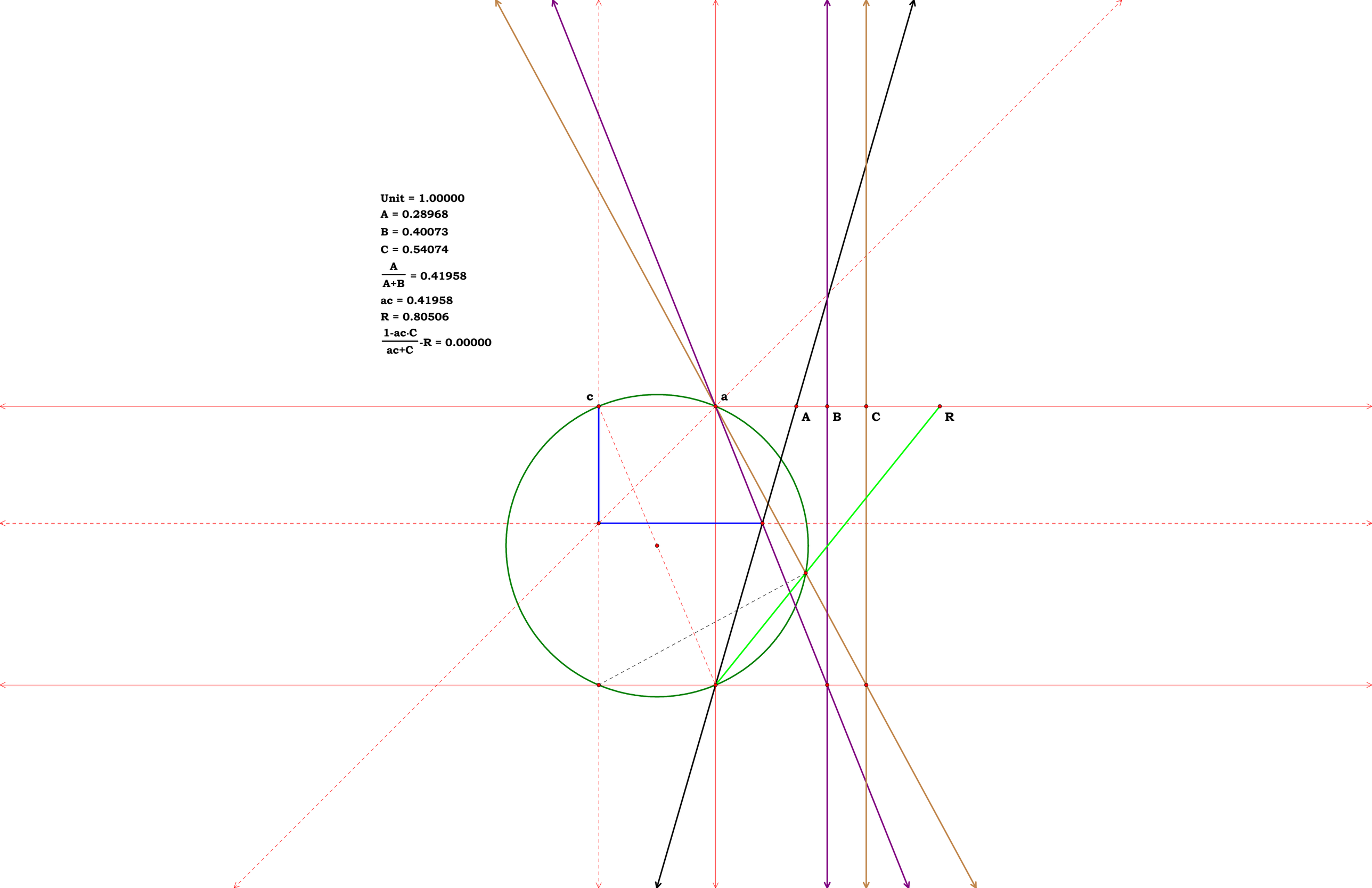
B

C

D


Unit = 1.00000
A = 0.82077
B = 0.30175
C = 0.46832
(A-B)/A = 0.63235
ac = 0.63235
R = 0.63947
(1-ac·C)/(ac+C)-R = 0.00000
c
a
B
C
R
A


Unit = 1.00000
A = 0.65903
B = 0.21485
C = 0.41039
B/A = 0.32601
ac = 0.32601
R = 1.17629
(1-ac·C)/(ac+C)-R = 0.00000
c
a
B
C
A
R


Unit = 1.00000
A = 0.28968
B = 0.40073
C = 0.54074
A/(A+B) = 0.41958
ac = 0.41958
R = 0.80506
(1-ac·C)/(ac+C)-R = 0.00000
c
a
A
B
C
R

Unit = 1.00000

A = 0.20036

B = 0.49005

C = 0.69524

$\frac{B}{A+B}$ = 0.70979

ac = 0.70979

R = 0.36051

$\frac{1-ac\cdot C}{ac+C}$-R = 0.00000

c

a

A

R

B

C

Unit = 1.00000

A = 0.18347

B = 0.90285

C = 0.52385

$\frac{A}{B}$ = 0.20321

ac = 0.20321

R = 1.22900

$\frac{1-ac \cdot C}{ac+C}$-R = 0.00000

c

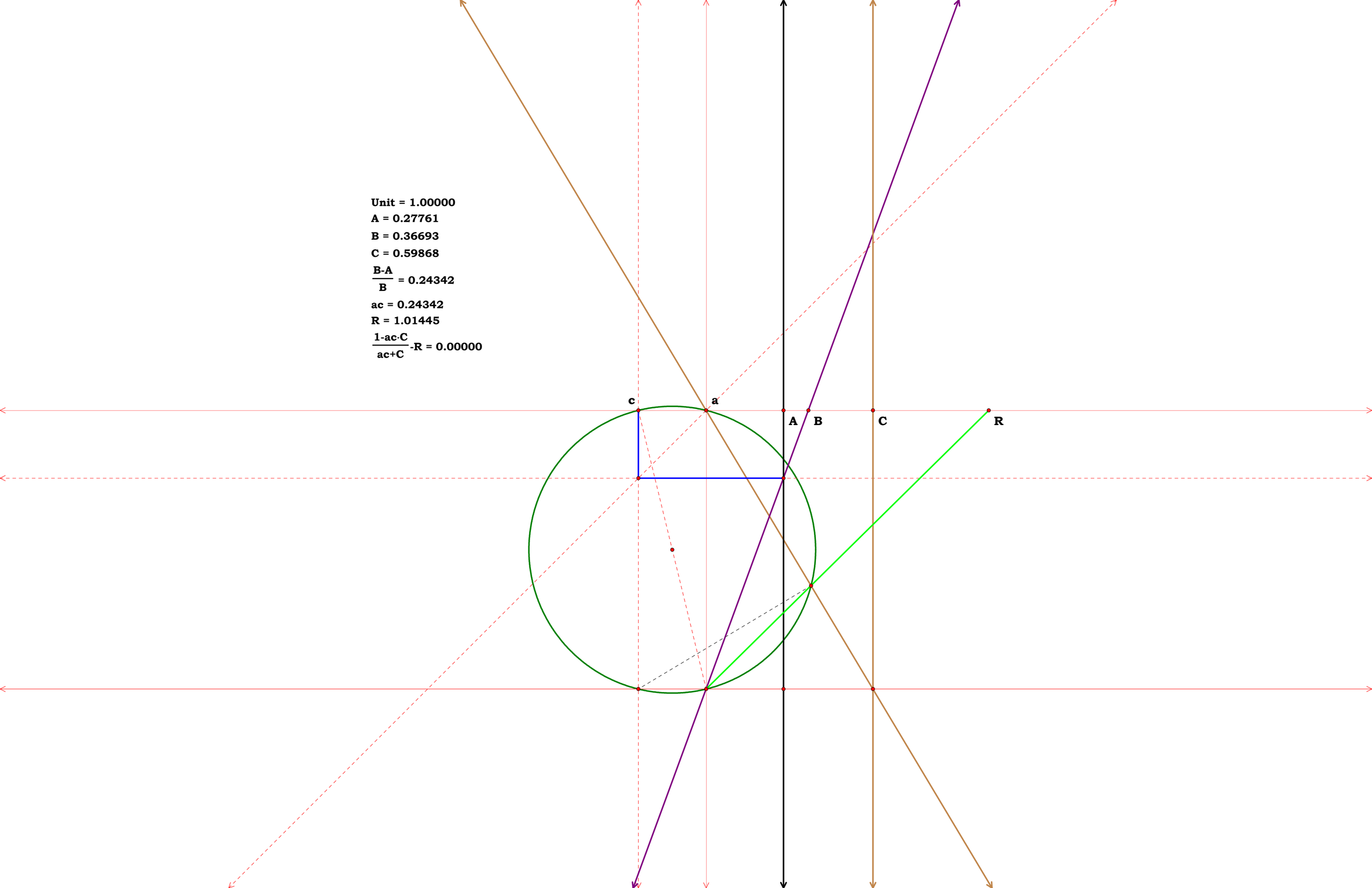
a

A

C

B

R


Unit = 1.00000
A = 0.27761
B = 0.36693
C = 0.59868
(B-A)/B = 0.24342
ac = 0.24342
R = 1.01445
(1-ac·C)/(ac+C)-R = 0.00000
c
a
A
B
C
R

Unit = 1.00000

A = 0.34279

B = 0.23175

C = 1.05252

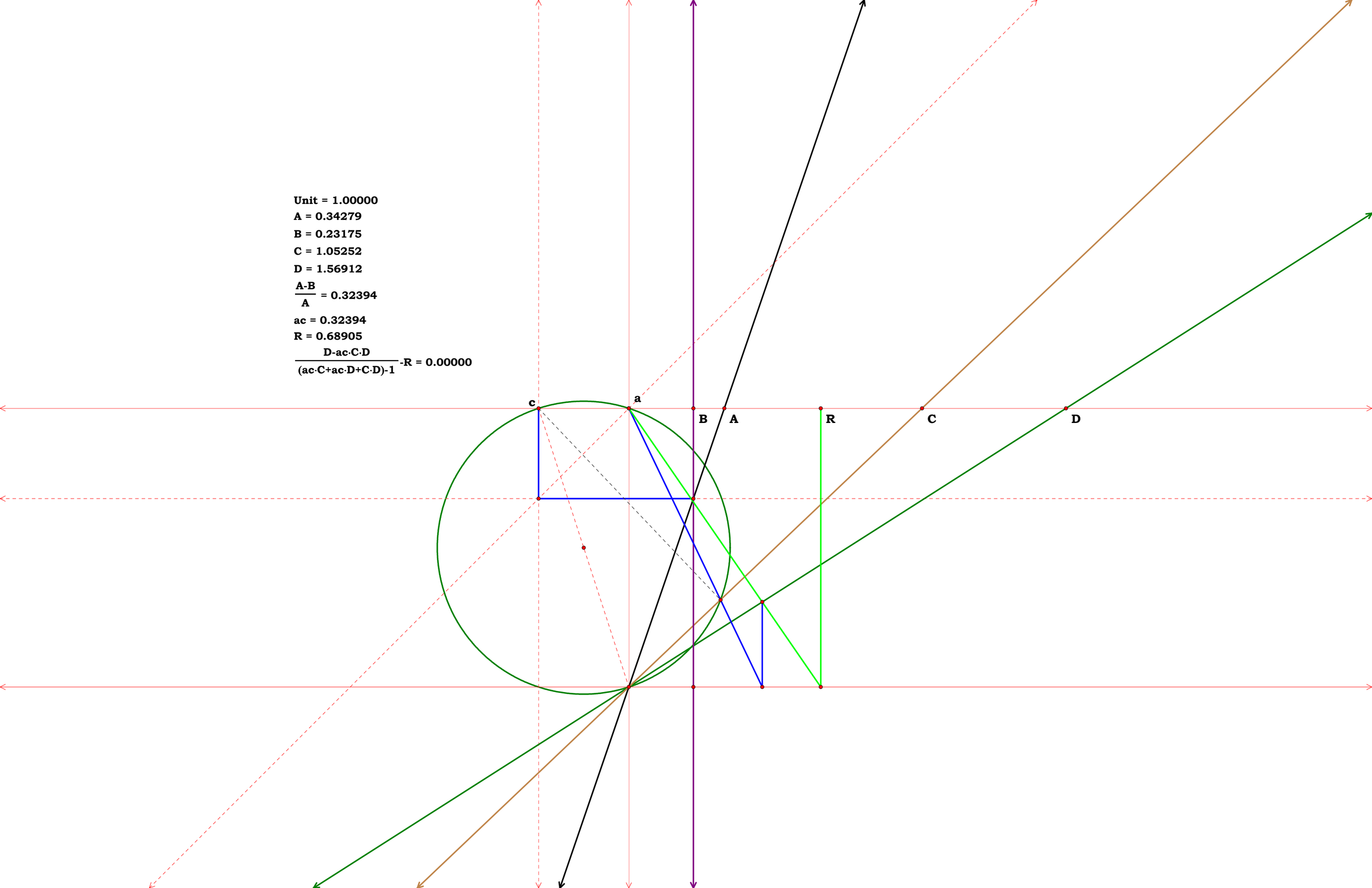
D = 1.56912

$\frac{A-B}{A}$ = 0.32394

ac = 0.32394

R = 0.68905

$\frac{D-ac \cdot C \cdot D}{(ac \cdot C+ac \cdot D+C \cdot D)-1}-R$ = 0.00000



Unit = 1.00000

A = 0.36693

B = 0.24140

C = 0.59868

D = 1.14425

$\frac{B}{A}$ = 0.65789

ac = 0.65789

R = 0.83391

$\frac{D-ac\cdot C\cdot D}{(ac\cdot C+ac\cdot D+C\cdot D)-1}-R$ = 0.00000

c

a

B

A

C

R

D

Unit = 1.00000

A = 0.29451

B = 0.73145

C = 0.87871

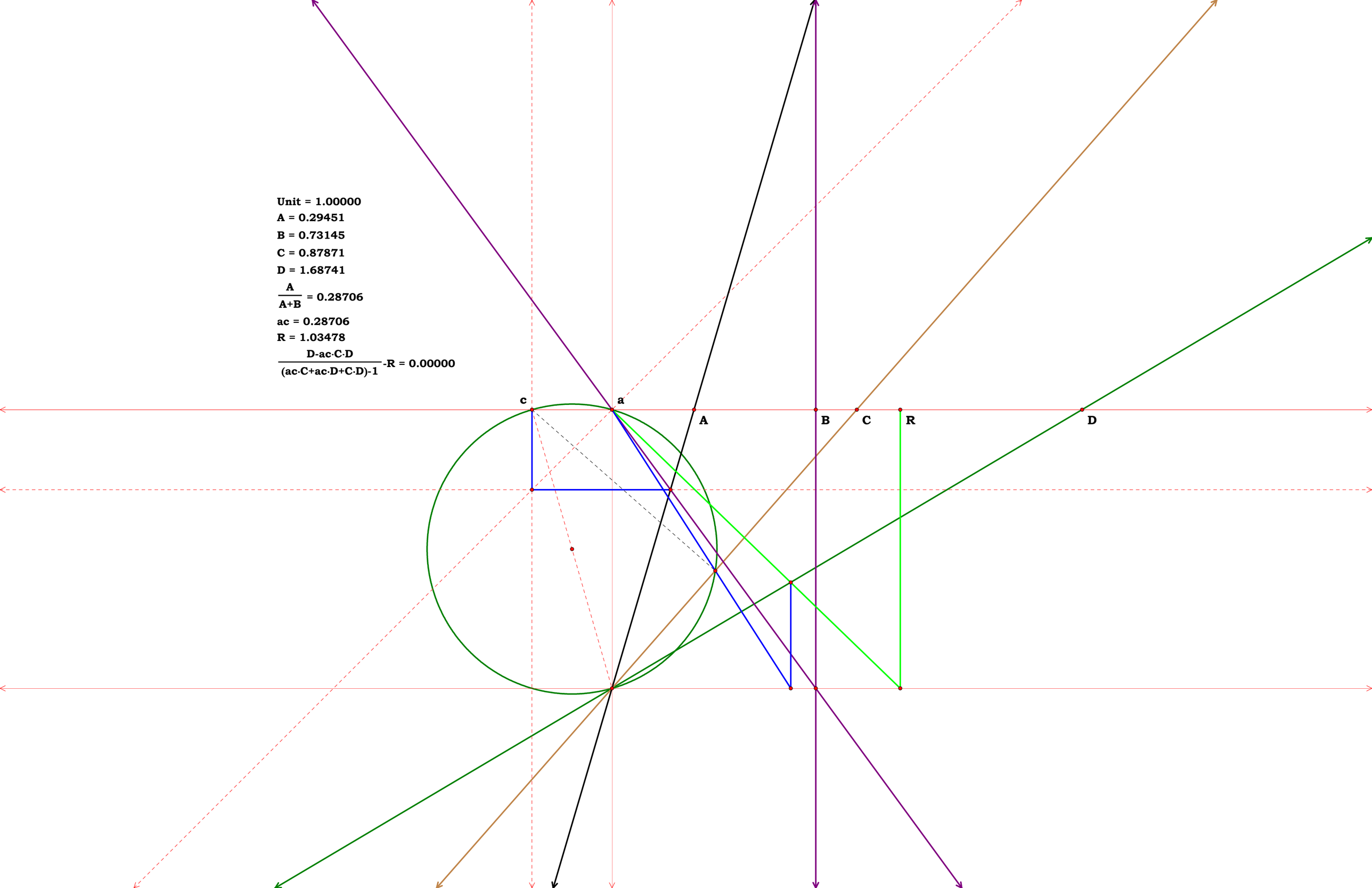
D = 1.68741

$\frac{A}{A+B}$ = 0.28706

ac = 0.28706

R = 1.03478

$\frac{D-ac\cdot C\cdot D}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$-R = 0.00000



Unit = 1.00000

A = 0.96803

B = 0.53592

C = 0.76525

D = 1.55222

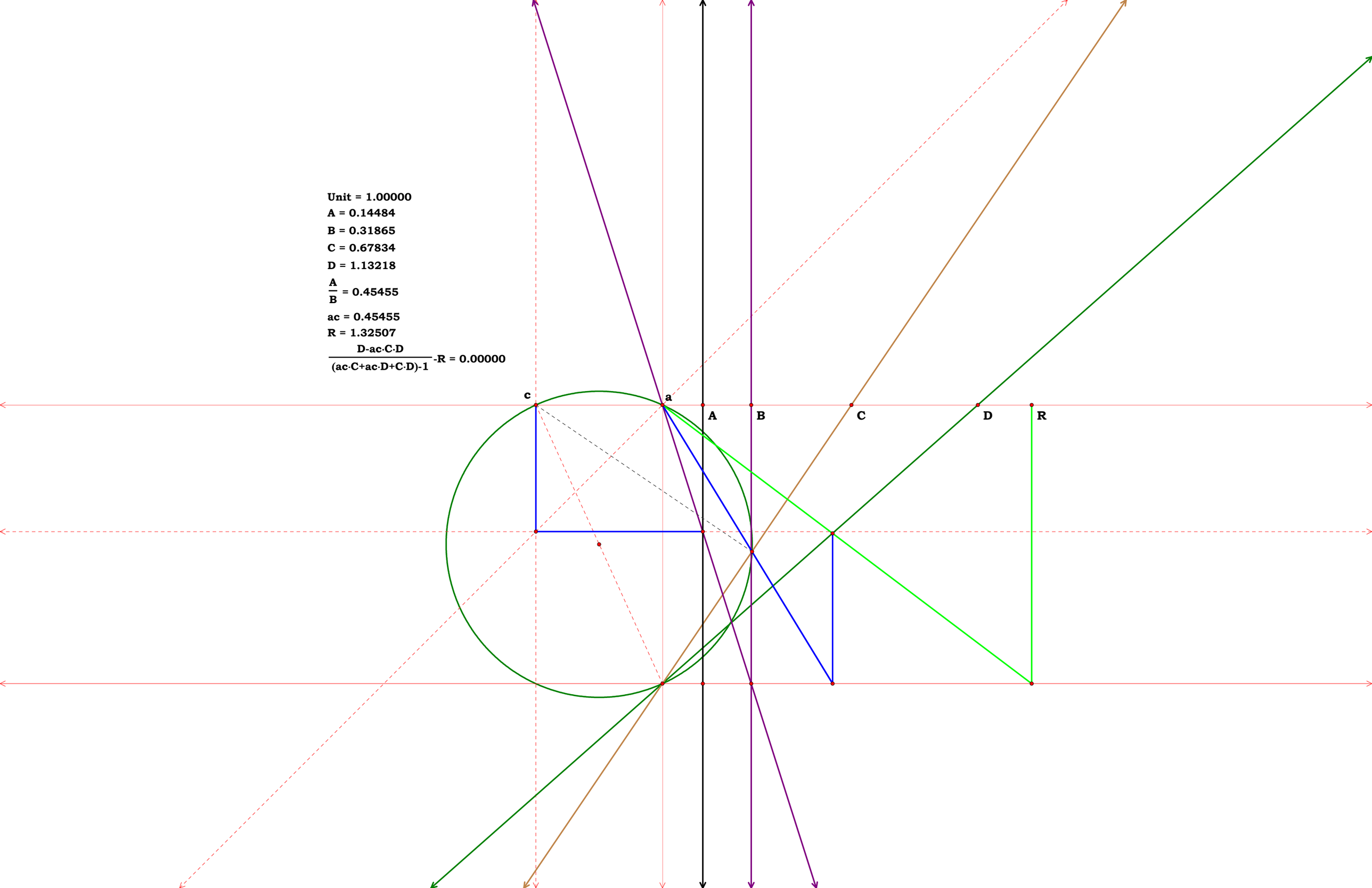
$\frac{B}{A+B}$ = 0.35634

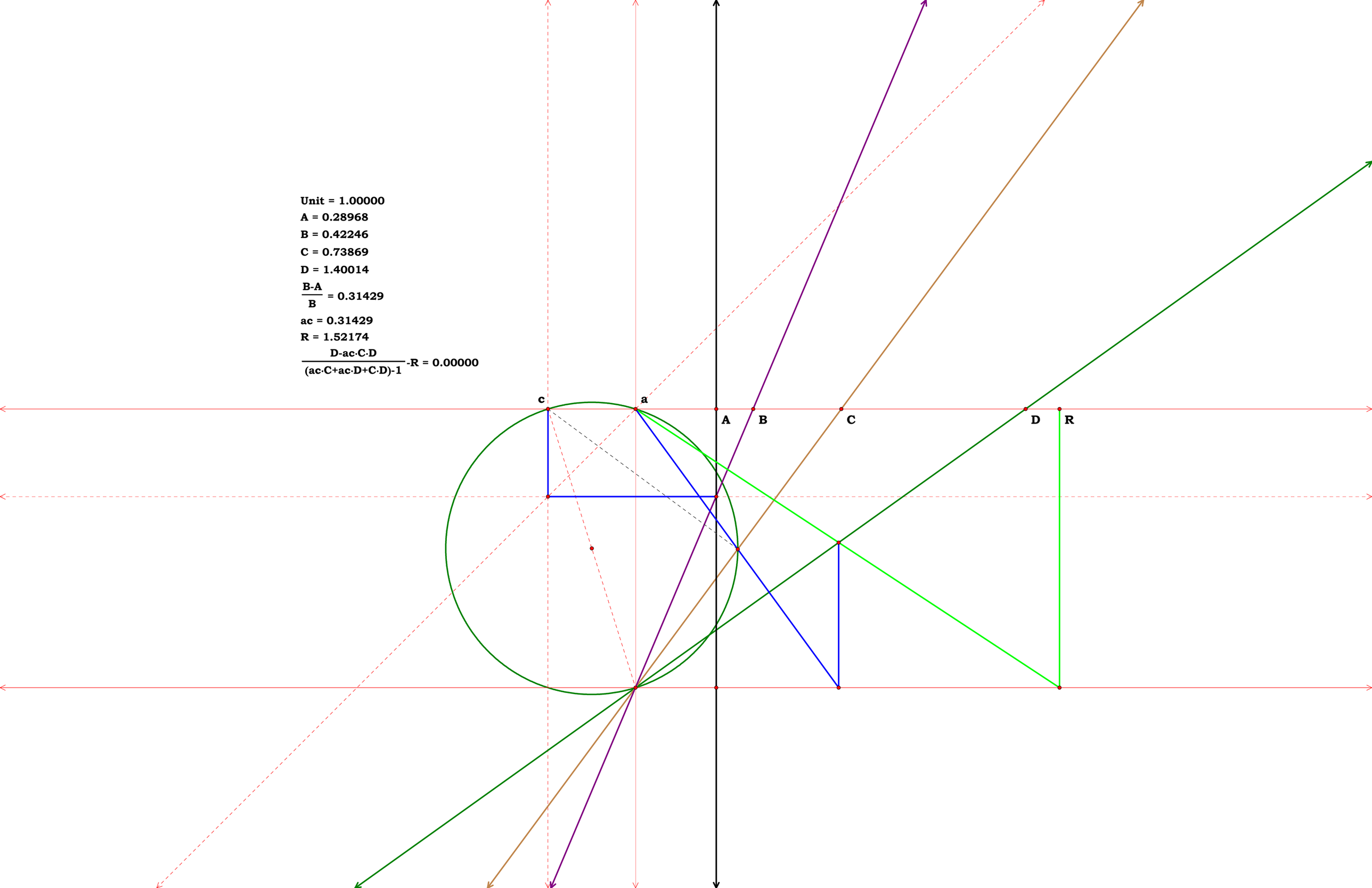
ac = 0.35634

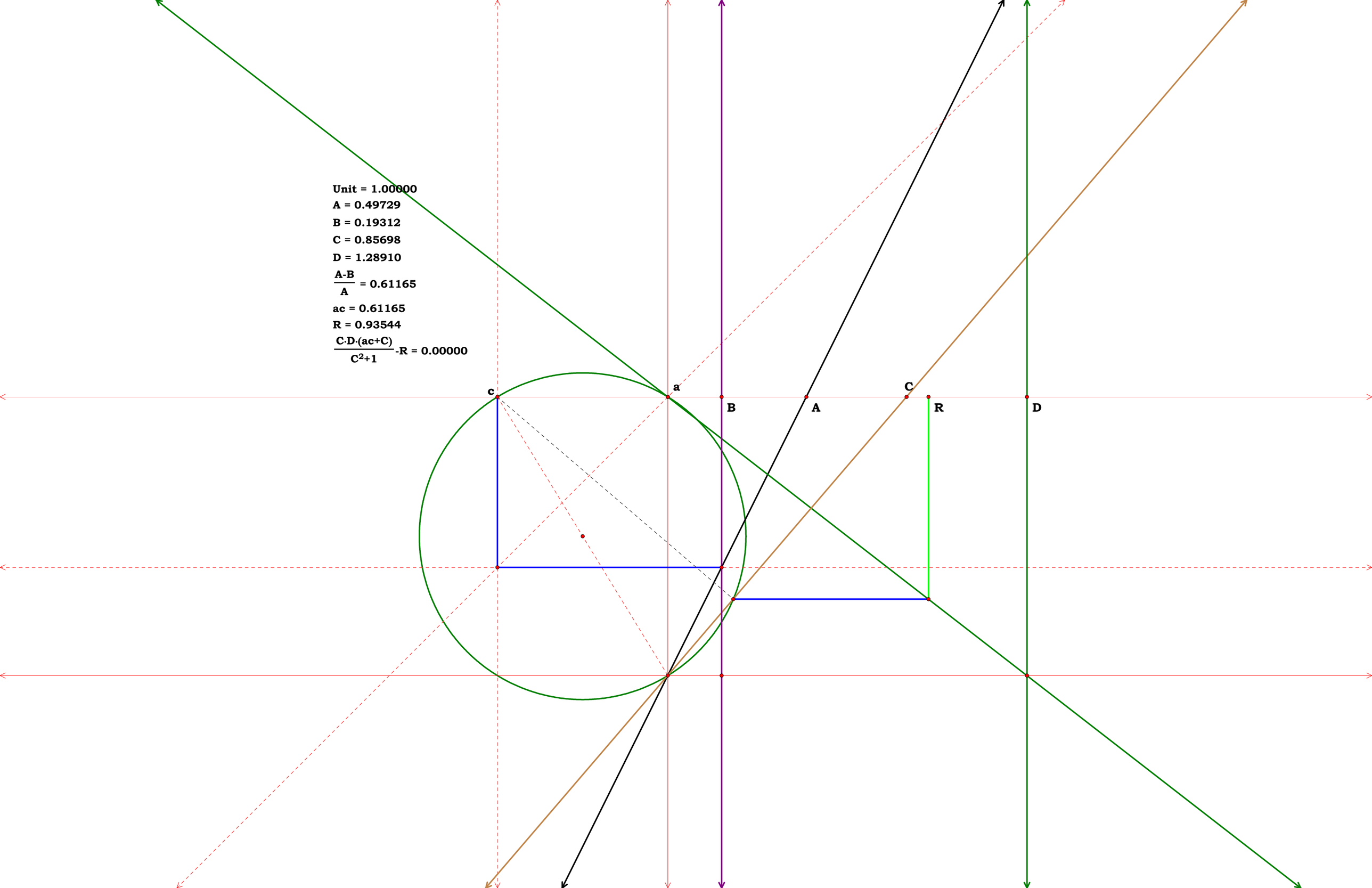
R = 1.11375

$\frac{D-ac\cdot C\cdot D}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$ -R = 0.00000

c a B C A R D


Unit = 1.00000
A = 0.14484
B = 0.31865
C = 0.67834
D = 1.13218
A/B = 0.45455
ac = 0.45455
R = 1.32507
(D-ac·C·D)/((ac·C+ac·D+C·D)-1) -R = 0.00000
c
a
A
B
C
D
R


Unit = 1.00000
A = 0.28968
B = 0.42246
C = 0.73869
D = 1.40014
(B-A)/B = 0.31429
ac = 0.31429
R = 1.52174
(D-ac·C·D)/((ac·C+ac·D+C·D)-1)-R = 0.00000
c
a
A
B
C
D
R


Unit = 1.00000
A = 0.49729
B = 0.19312
C = 0.85698
D = 1.28910
(A-B)/A = 0.61165
ac = 0.61165
R = 0.93544
C·D·(ac+C)/(C²+1)-R = 0.00000
c
a
B
A
C
R
D

Unit = 1.00000

A = 0.51419

B = 0.23175

C = 0.84008

D = 1.08873

$\frac{B}{A}$ = 0.45070

ac = 0.45070

R = 0.69213

$\frac{C \cdot D \cdot (ac+C)}{C^2+1}$ -R = 0.00000

c

a

B

A

R

C

D

Unit = 1.00000

A = 0.21968

B = 0.67110

C = 1.08149

D = 1.31806

$\frac{A}{A+B}$ = 0.24661

ac = 0.24661

R = 0.87258

$\frac{C \cdot D \cdot (ac+C)}{C^2+1}$ - R = 0.00000

c

a

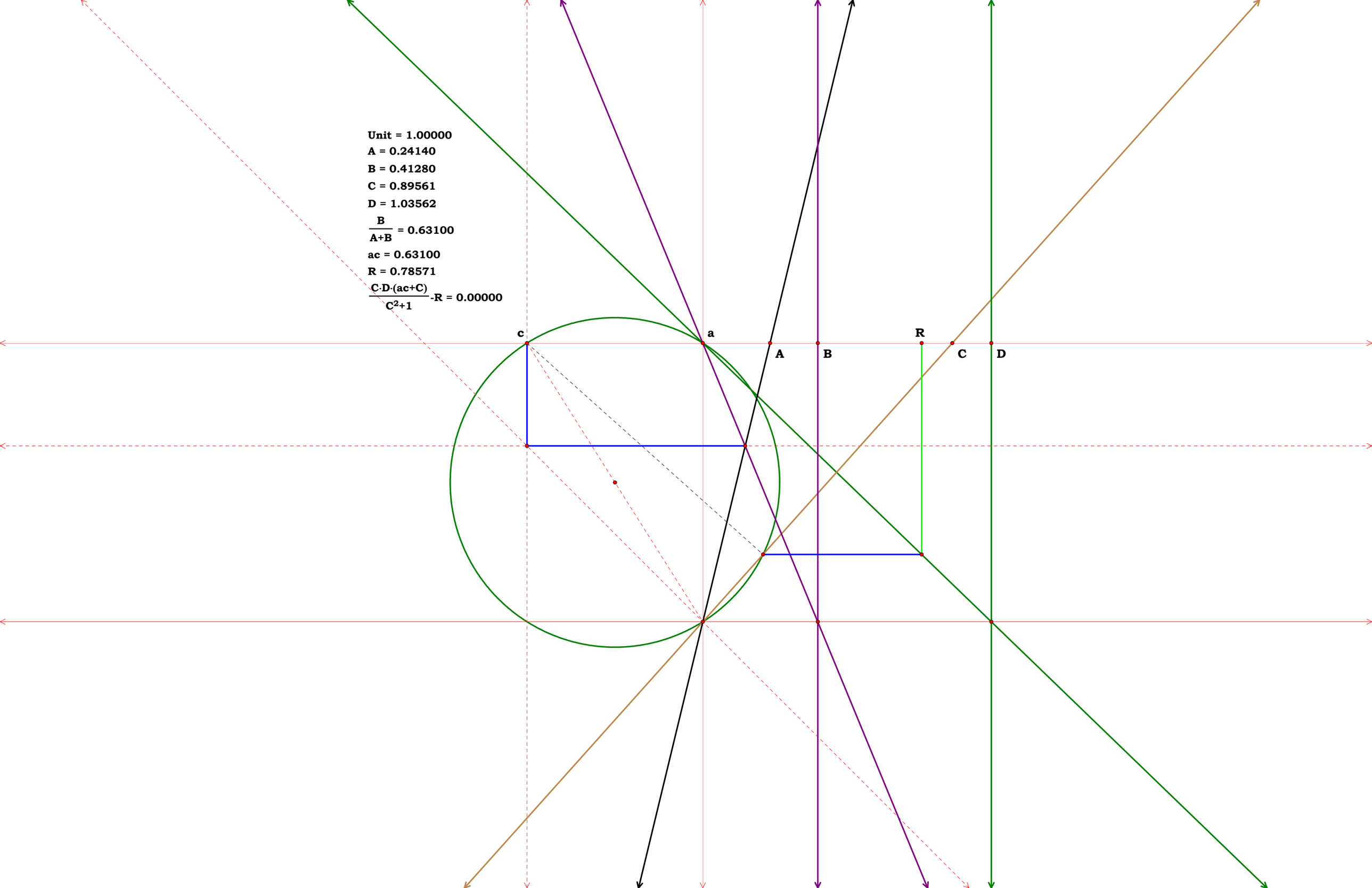
A

B

R

C

D


Unit = 1.00000
A = 0.24140
B = 0.41280
C = 0.89561
D = 1.03562
B / (A+B) = 0.63100
ac = 0.63100
R = 0.78571
C·D·(ac+C) / (C^2+1) -R = 0.00000
c
a
A
B
R
C
D

Unit = 1.00000

A = 0.17622

B = 0.42246

C = 0.75077

D = 0.99217

$\frac{A}{B}$ = 0.41714

ac = 0.41714

R = 0.55636

$\frac{C \cdot D \cdot (ac+C)}{C^2+1}$ - R = 0.00000

c

a

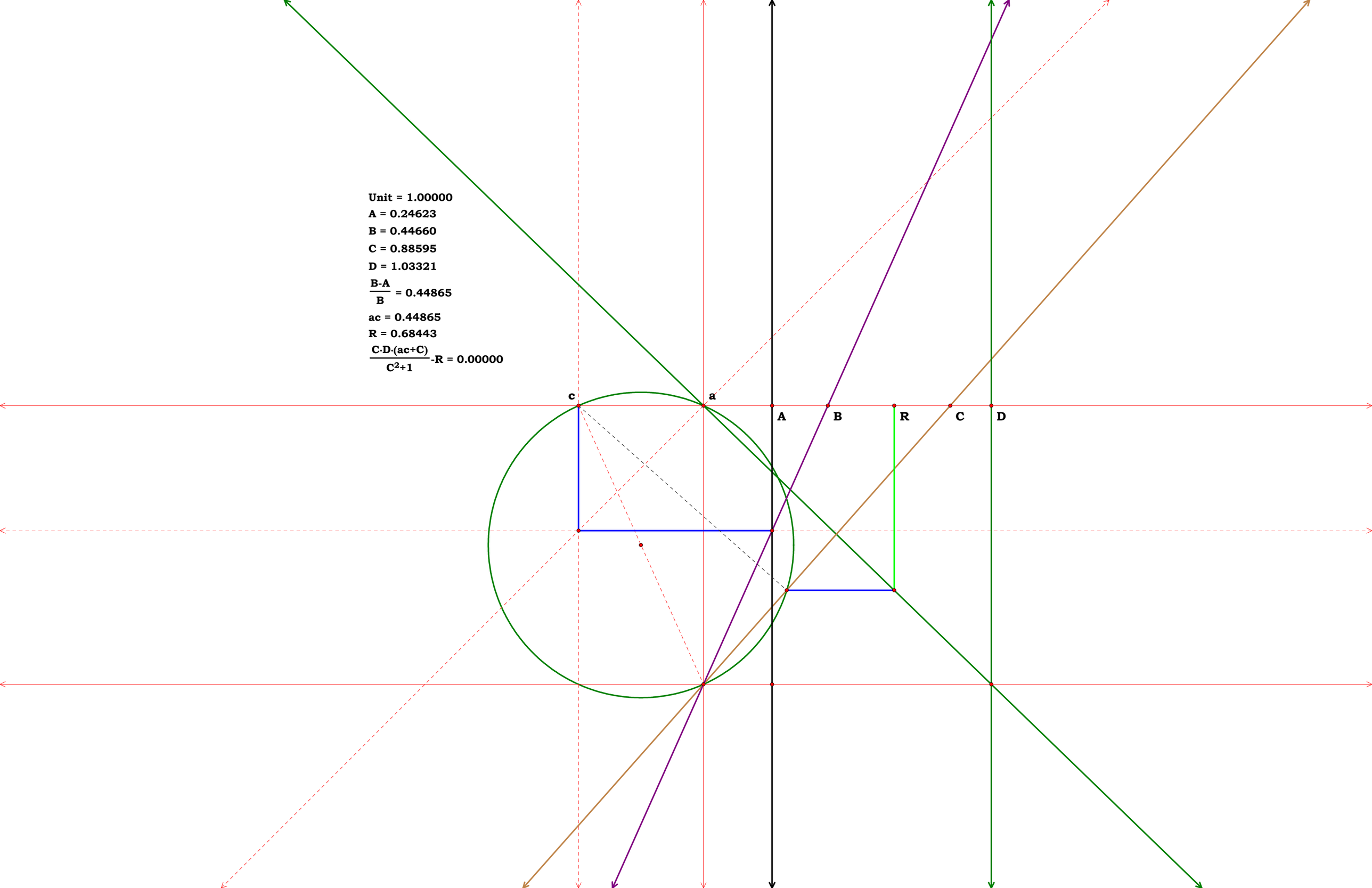
A

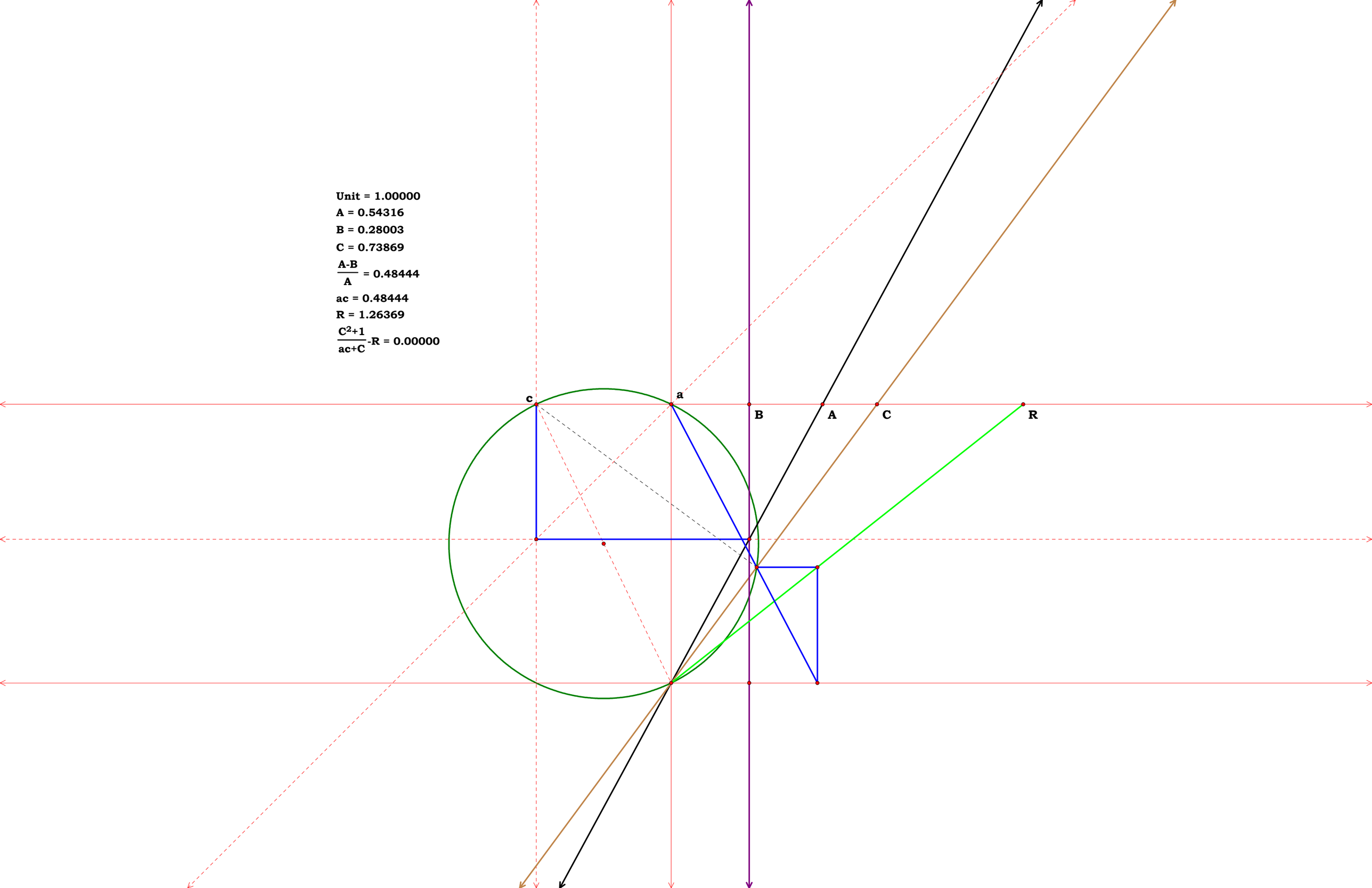
B

R

C

D


Unit = 1.00000
A = 0.24623
B = 0.44660
C = 0.88595
D = 1.03321
(B-A)/B = 0.44865
ac = 0.44865
R = 0.68443
C·D·(ac+C)/(C²+1) -R = 0.00000
c
a
A
B
R
C
D


Unit = 1.00000
A = 0.54316
B = 0.28003
C = 0.73869
(A-B)/A = 0.48444
ac = 0.48444
R = 1.26369
(C²+1)/(ac+C)-R = 0.00000
c
a
B
A
C
R

Unit = 1.00000

A = 0.33314

B = 0.23175

C = 0.63489

$\frac{B}{A}$ = 0.69565

ac = 0.69565

R = 1.05452

$\frac{C^2+1}{ac+C}$-R = 0.00000

c

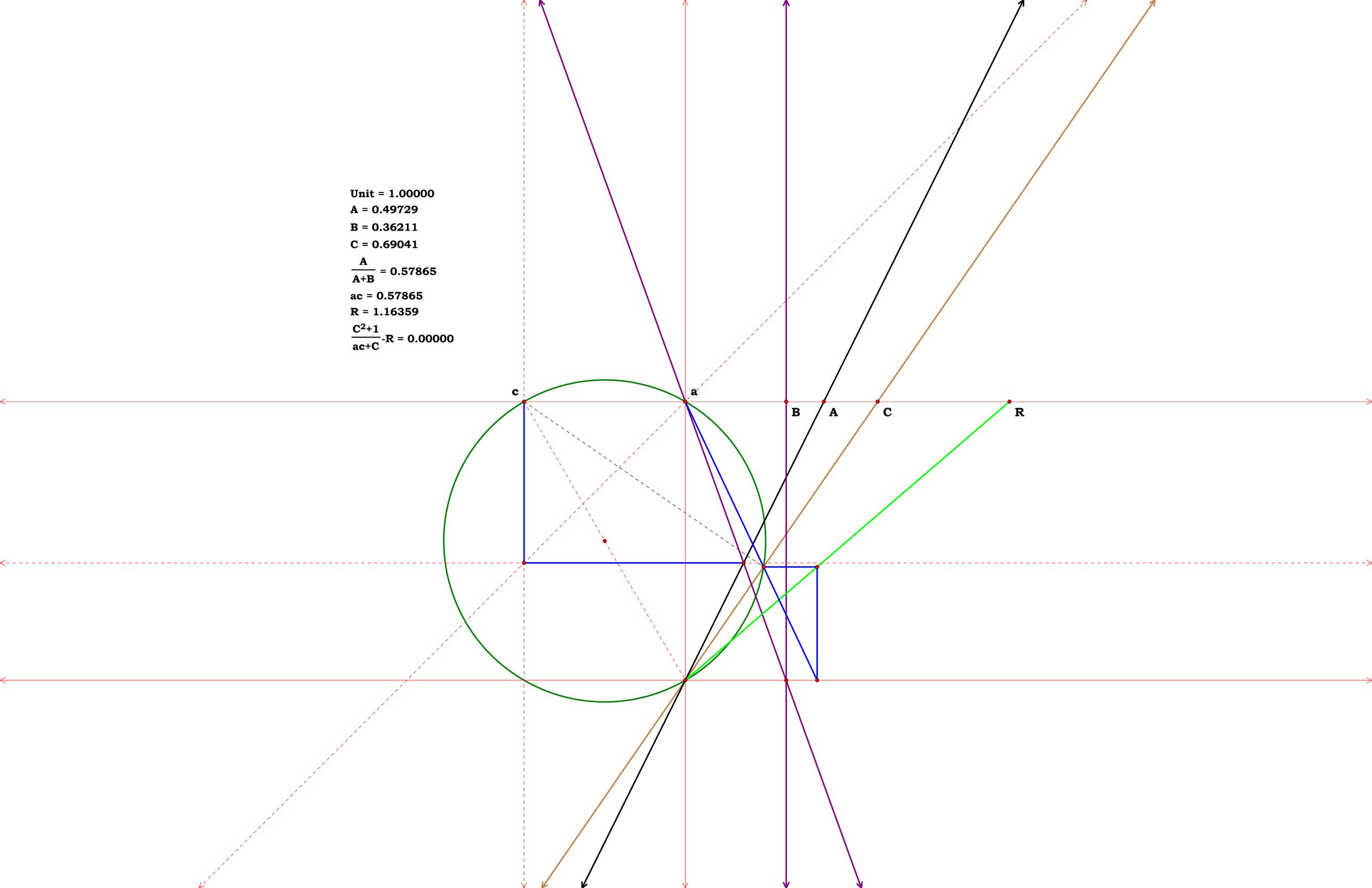
a

B

A

C

R


Unit = 1.00000
A = 0.49729
B = 0.36211
C = 0.69041
A/(A+B) = 0.57865
ac = 0.57865
R = 1.16359
(C²+1)/(ac+C)-R = 0.00000
c
a
B
A
C
R

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.60109

$\frac{B}{A+B}$ = 0.63529

ac = 0.63529

R = 1.10104

$\frac{C^2+1}{ac+C}$-R = 0.00000

c

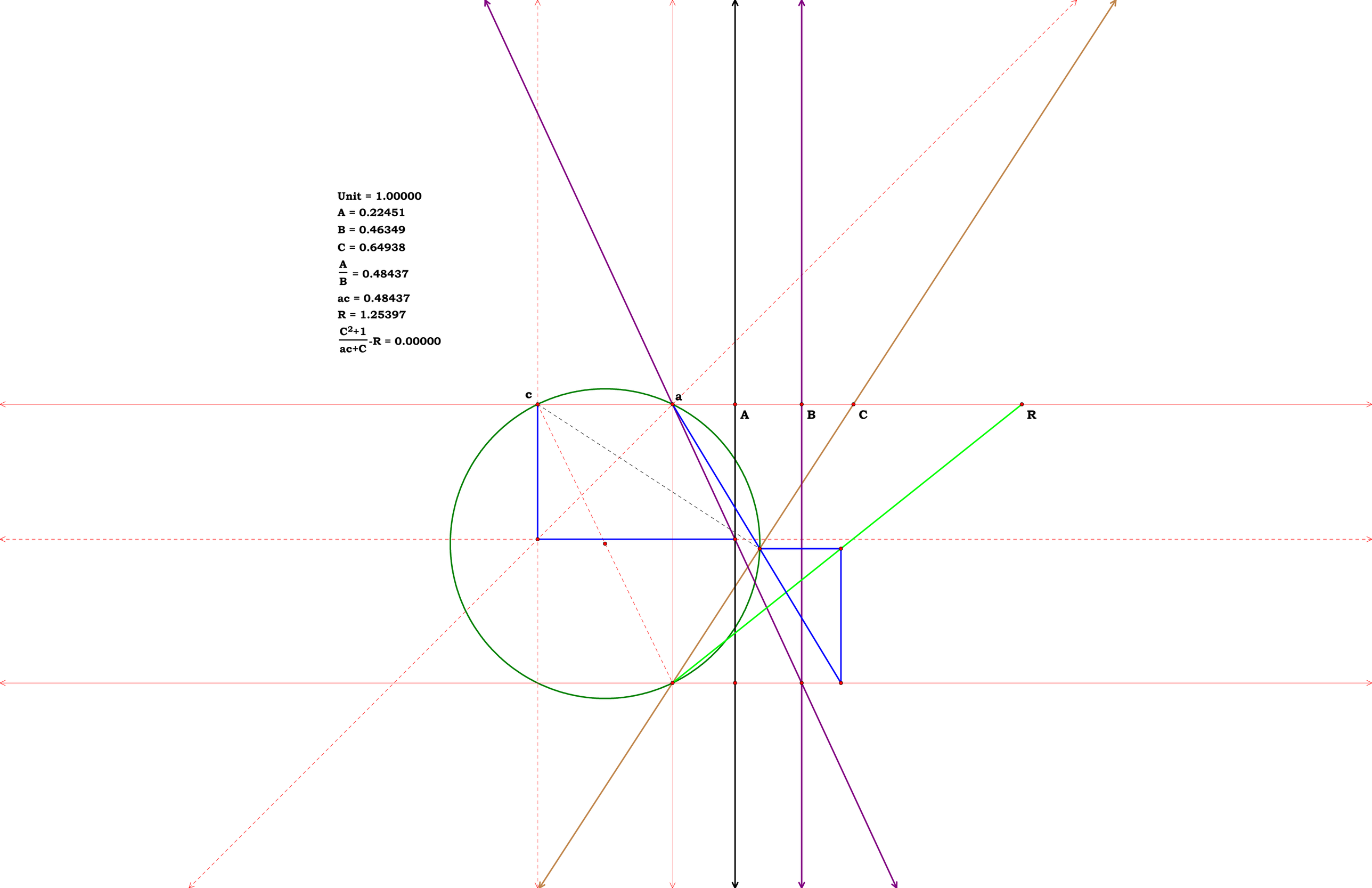
a

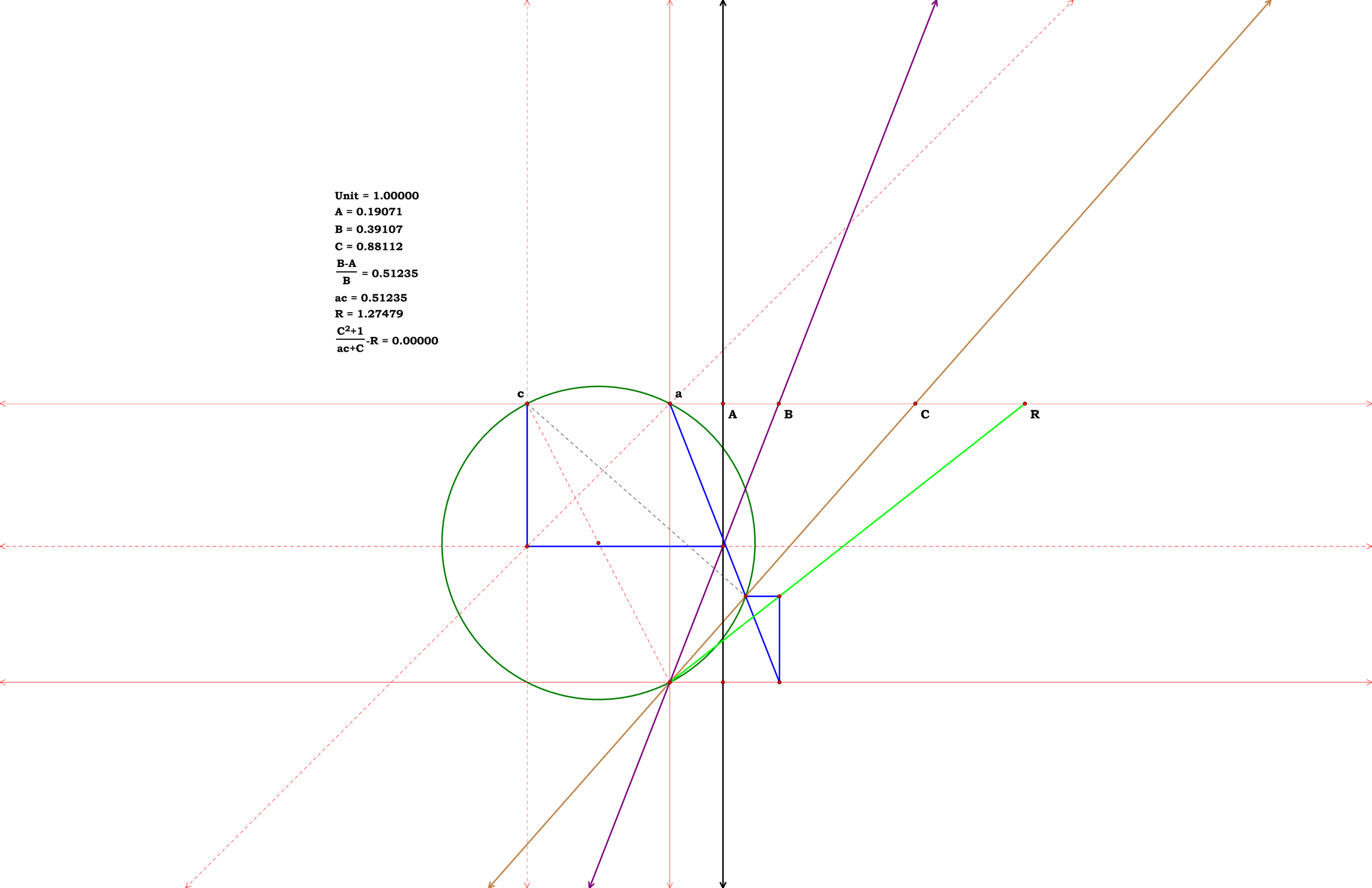
A

B

C

R


Unit = 1.00000
A = 0.22451
B = 0.46349
C = 0.64938
A/B = 0.48437
ac = 0.48437
R = 1.25397
(C²+1)/(ac+C)-R = 0.00000
c
a
A
B
C
R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.88112
(B-A)/B = 0.51235
ac = 0.51235
R = 1.27479
(C^2+1)/(ac+C)-R = 0.00000
c
a
A
B
C
R

Unit = 1.00000

A = 0.54799

B = 0.16657

C = 0.41039

D = 2.13642

$\frac{A-B}{A}$ = 0.69604

ac = 0.69604

R = 1.51339

$\frac{D\cdot(C^2+1)}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$-R = 0.00000

c a B C A R D

Unit = 1.00000

A = 0.42004

B = 0.24865

C = 0.67593

D = 1.31324

$\frac{B}{A}$ = 0.59195

ac = 0.59195

R = 1.79621

$\frac{D\cdot(C^2+1)}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$ -R = 0.00000

c a B A C D R

Unit = 1.00000

A = 0.24865

B = 0.44660

C = 0.74835

D = 1.50636

$\frac{A}{A+B}$ = 0.35764

ac = 0.35764

R = 2.51695

$\frac{D\cdot(C^2+1)}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$ -R = 0.00000

c a A B C D R

Unit = 1.00000

A = 0.67352

B = 0.93182

C = 0.80870

D = 1.16357

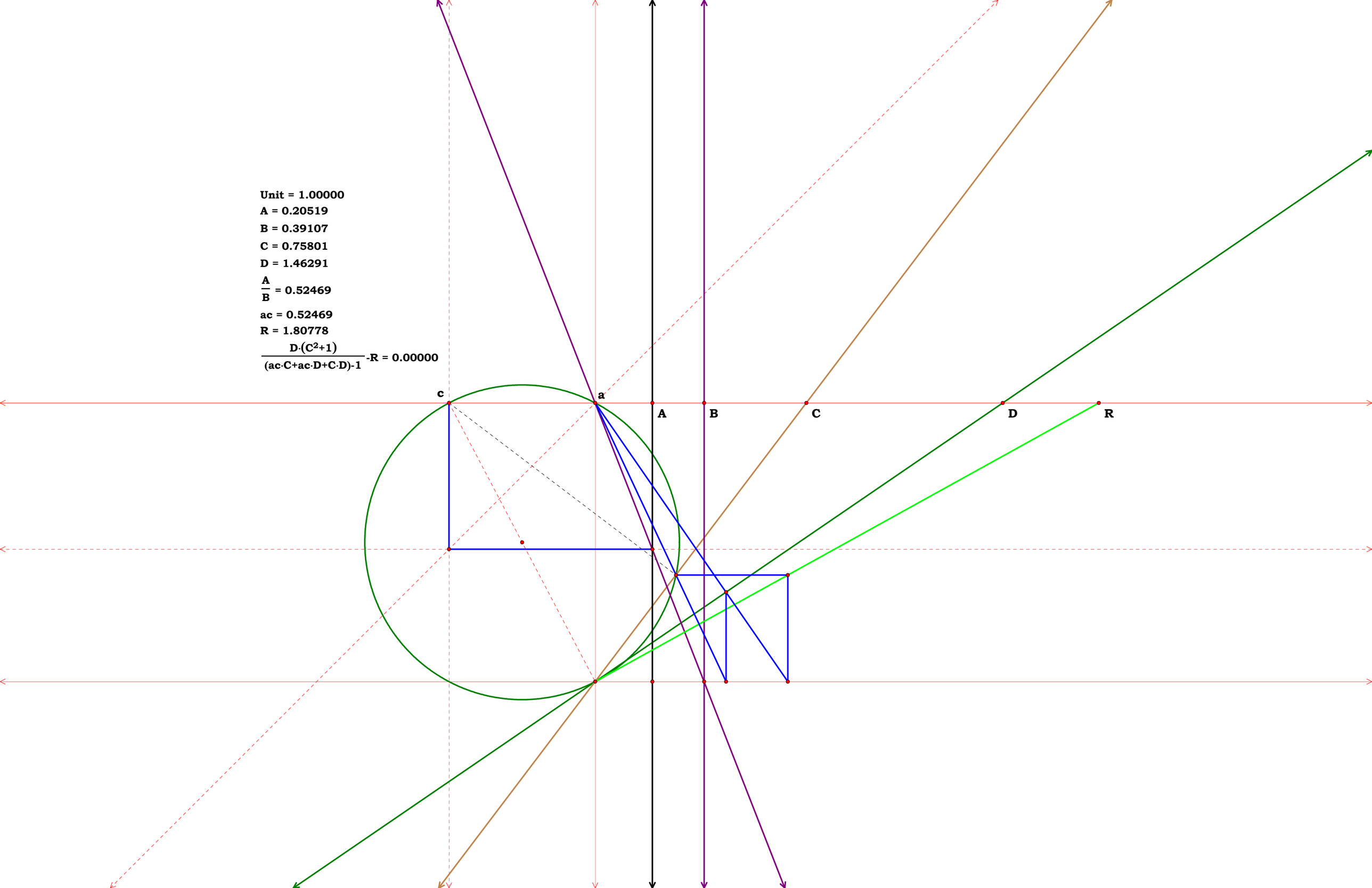
$\frac{B}{A+B}$ = 0.58045

ac = 0.58045

R = 1.77249

$\frac{D\cdot(C^2+1)}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$ -R = 0.00000

c a A C B D R


Unit = 1.00000
A = 0.20519
B = 0.39107
C = 0.75801
D = 1.46291
A/B = 0.52469
ac = 0.52469
R = 1.80778
D·(C²+1)/(ac·C+ac·D+C·D)-1 -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.17622

B = 0.25589

C = 0.99941

D = 2.22574

$\frac{B-A}{B}$ = 0.31132

ac = 0.31132

R = 1.99636

$\frac{D\cdot(C^2+1)}{(ac\cdot C+ac\cdot D+C\cdot D)-1}$-R = 0.00000

c a A B C R D

Unit = 1.00000

A = 0.49729

B = 0.35004

C = 0.68317

D = 1.20702

$\frac{A-B}{A}$ = 0.29612

ac = 0.29612

R = 1.01231

$\frac{C \cdot D \cdot (ac+C)}{1-ac \cdot C}$ -R = 0.00000

c

a

B

A

C

R

D

Unit = 1.00000

A = 0.26072

B = 0.20278

C = 0.56971

D = 0.82801

$\frac{B}{A}$ = 0.77778

ac = 0.77778

R = 1.14143

$\frac{C \cdot D \cdot (ac+C)}{1-ac \cdot C}$ -R = 0.00000

c

a

B

A

C

D

R

Unit = 1.00000

A = 0.23175

B = 0.54316

C = 1.03079

D = 0.75559

$\frac{A}{A+B}$ = 0.29907

ac = 0.29907

R = 1.49738

$\frac{C \cdot D \cdot (ac+C)}{1-ac \cdot C}$ - R = 0.00000

c

a

A

B

D

C

R

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.65420

D = 1.02355

$\frac{B}{A+B}$ = 0.63529

ac = 0.63529

R = 1.47755

$\frac{C \cdot D \cdot (ac+C)}{1-ac \cdot C}$ -R = 0.00000

c

a

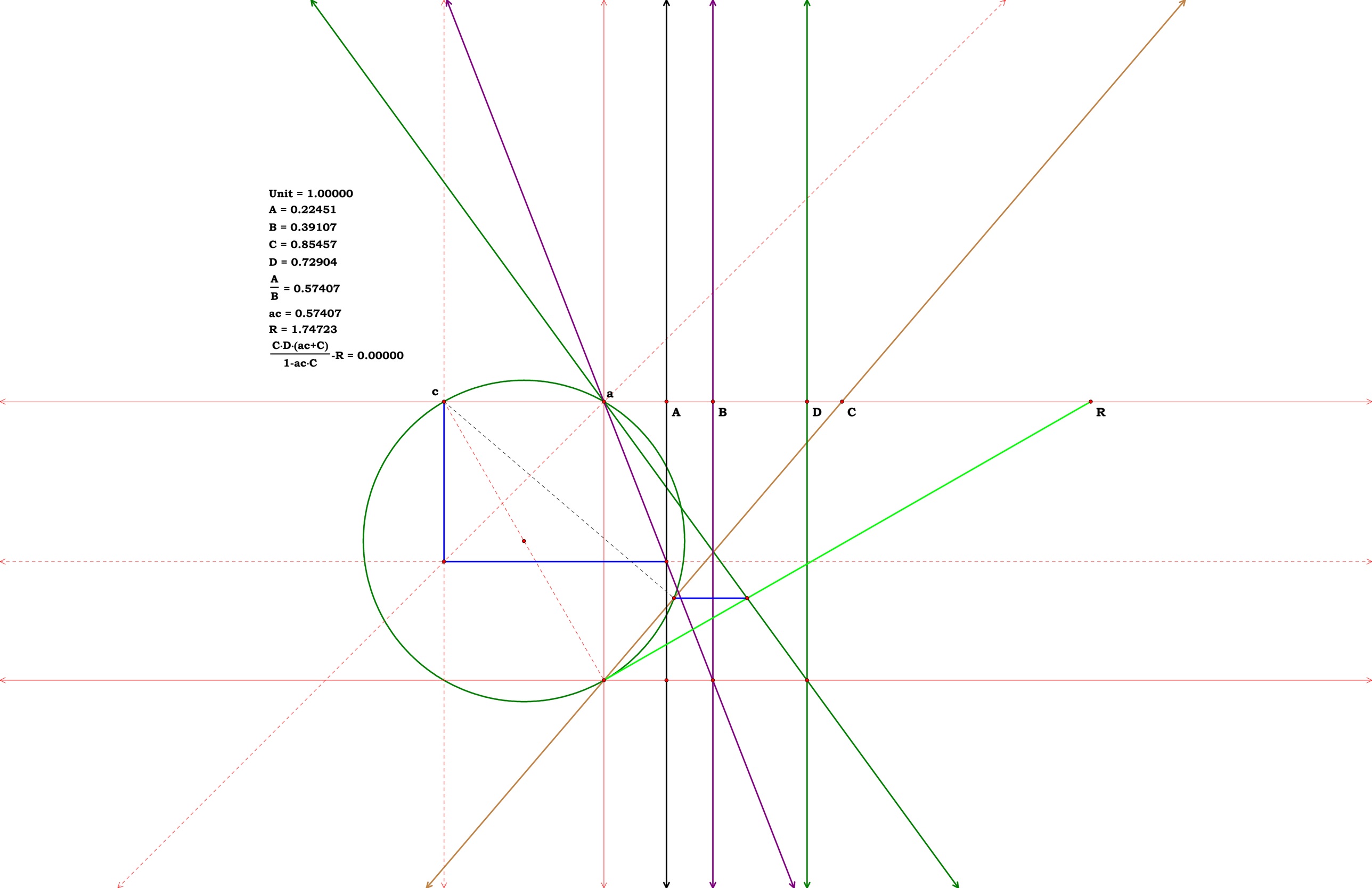
A

B

C

D

R


Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.85457
D = 0.72904
A/B = 0.57407
ac = 0.57407
R = 1.74723
C·D·(ac+C)/(1-ac·C) -R = 0.00000
c
a
A
B
D
C
R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.91975

D = 0.70731

$\frac{B-A}{B}$ = 0.51235

ac = 0.51235

R = 1.76191

$\frac{C \cdot D \cdot (ac+C)}{1-ac \cdot C}$ = 1.76191

c

a

A

B

D

C

R

Unit = 1.00000

A = 0.39349

B = 0.20519

C = 0.74111

D = 0.50936

$\frac{A-B}{A}$ = 0.47853

ac = 0.47853

R = 1.22277

$\frac{D\cdot(C^2+1)}{1-ac\cdot C}$-R = 0.00000

c

a

B

A

D

C

R

Unit = 1.00000

A = 0.42728

B = 0.29210

C = 0.55764

D = 0.69766

$\frac{B}{A}$ = 0.68362

ac = 0.68362

R = 1.47806

$\frac{D\cdot(C^2+1)}{1-ac\cdot C}$ -R = 0.00000

c

a

B

A

C

D

R

Unit = 1.00000

A = 0.21968

B = 0.39107

C = 0.96561

D = 0.70731

$\frac{A}{A+B}$ = 0.35968

ac = 0.35968

R = 2.09415

$\frac{D\cdot(C^2+1)}{1-ac\cdot C}$-R = 0.00000

c

a

A

B

D

C

R

Unit = 1.00000

A = 0.21485

B = 0.39107

C = 0.55764

D = 0.70731

$\frac{B}{A+B}$ = 0.64542

ac = 0.64542

R = 1.44865

$\frac{D\cdot(C^2+1)}{1-ac\cdot C}$-R = 0.00000

c

a

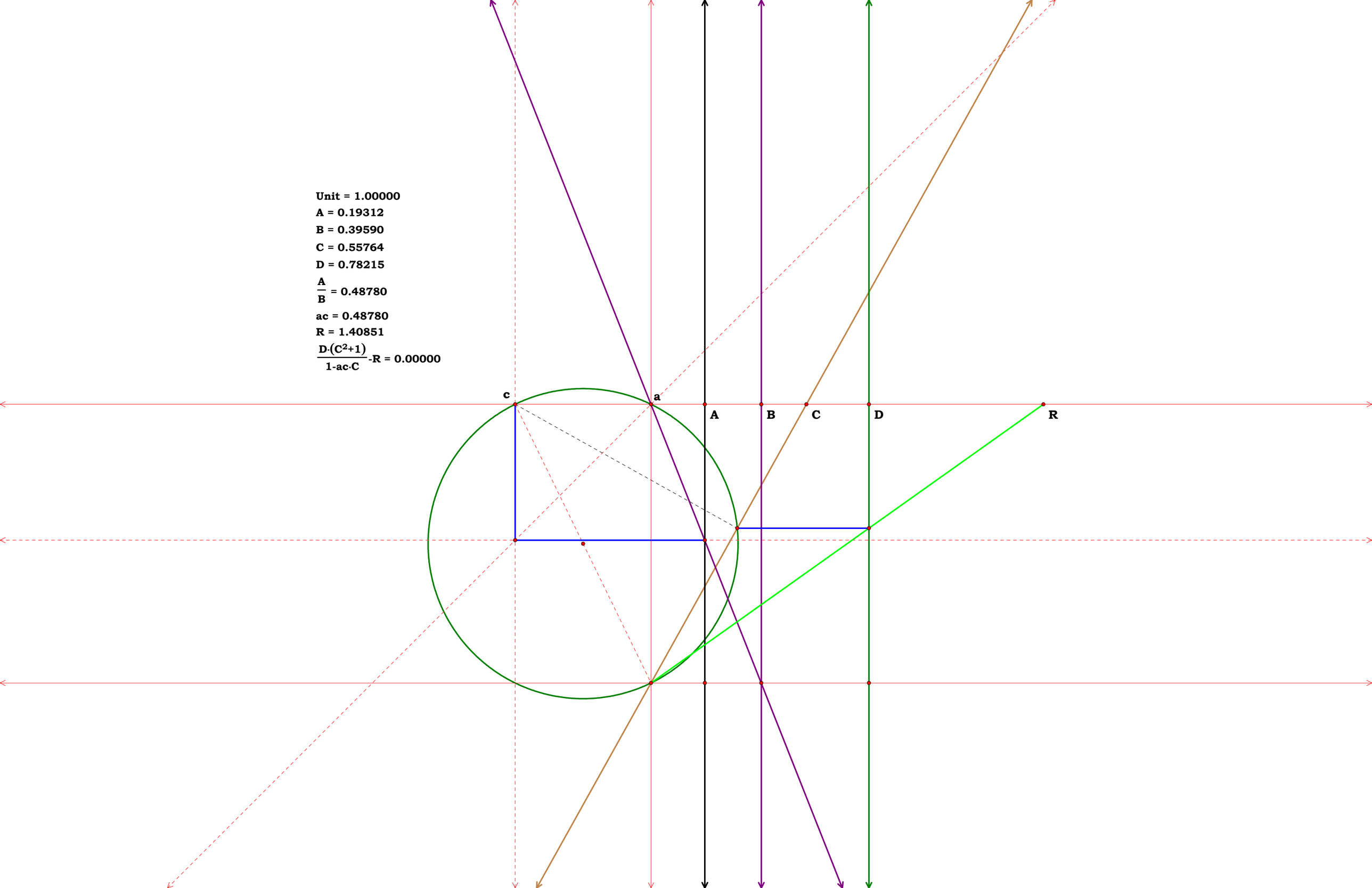
A

B

C

D

R


Unit = 1.00000
A = 0.19312
B = 0.39590
C = 0.55764
D = 0.78215
A/B = 0.48780
ac = 0.48780
R = 1.40851
D·(C²+1)/(1-ac·C) -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.25347

B = 0.39107

C = 0.55764

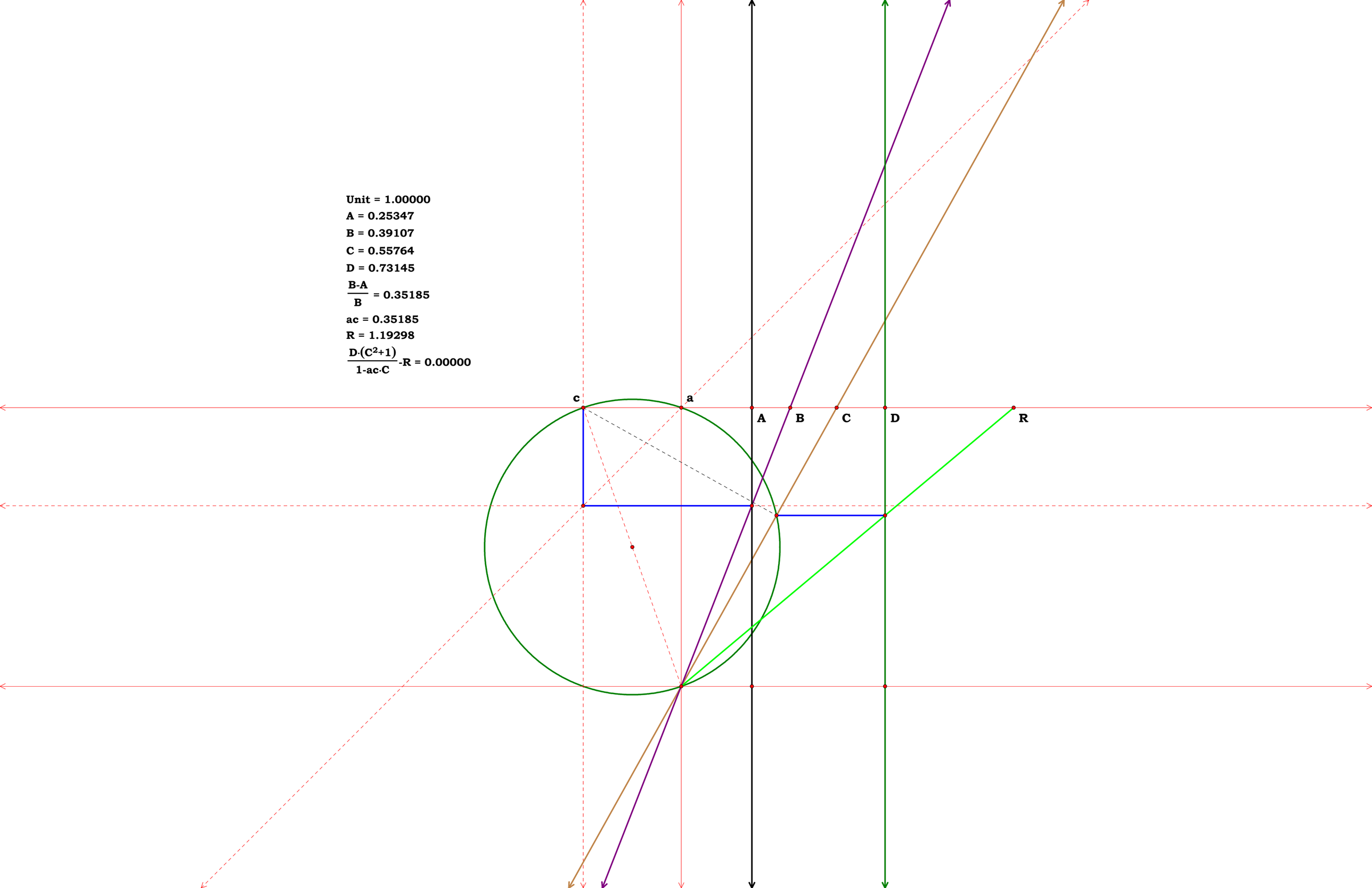
D = 0.73145

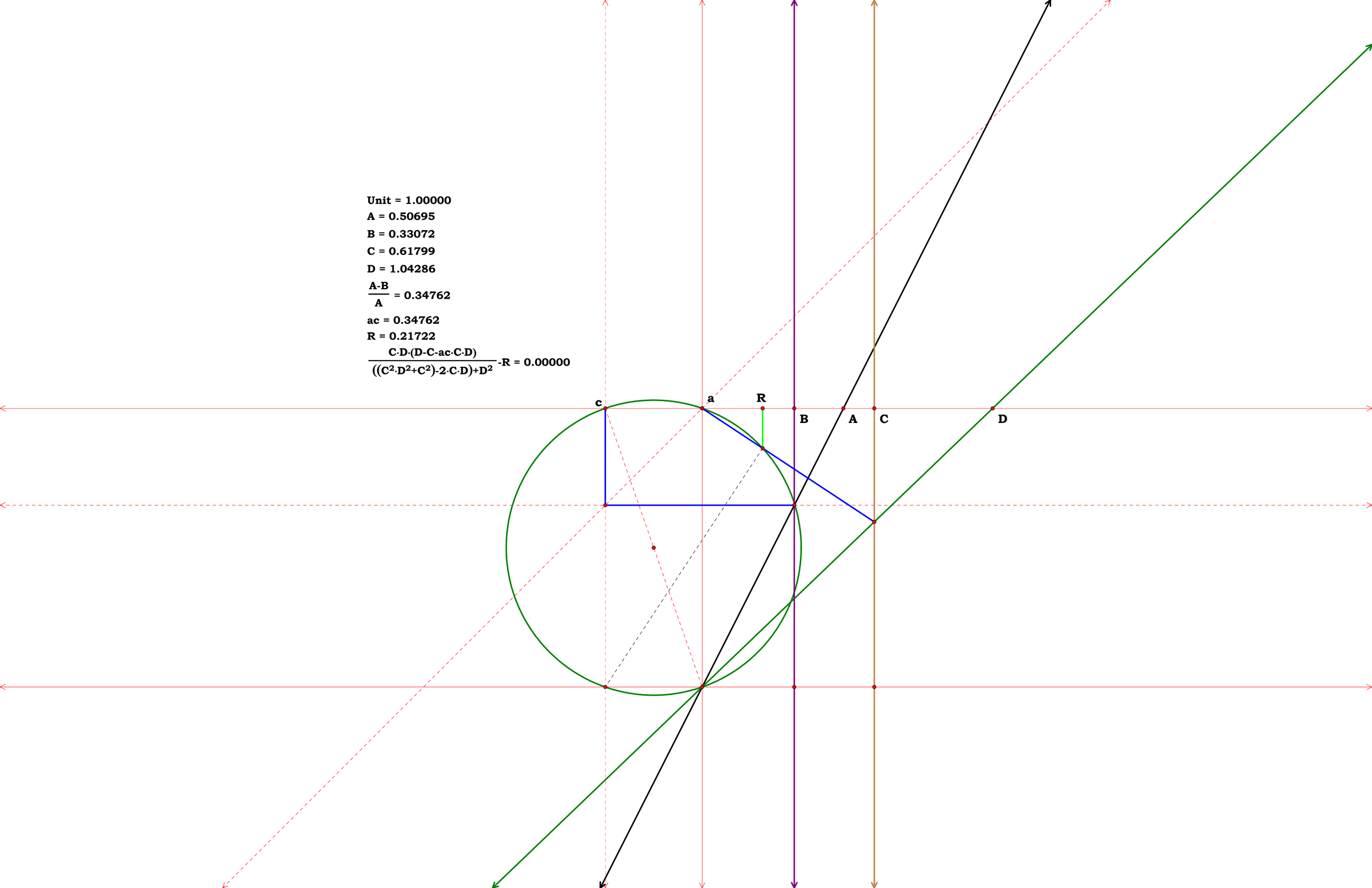
$\frac{B-A}{B}$ = 0.35185

ac = 0.35185

R = 1.19298

$\frac{D\cdot(C^2+1)}{1-ac\cdot C}$-R = 0.00000




Unit = 1.00000
A = 0.50695
B = 0.33072
C = 0.61799
D = 1.04286
(A-B)/A = 0.34762
ac = 0.34762
R = 0.21722
C·D·(D-C-ac·C·D)/((C²·D²+C²)-2·C·D)+D² -R = 0.00000
c
a
R
B
A
C
D

Unit = 1.00000

A = 0.94872

B = 0.64938

C = 0.39832

D = 1.38566

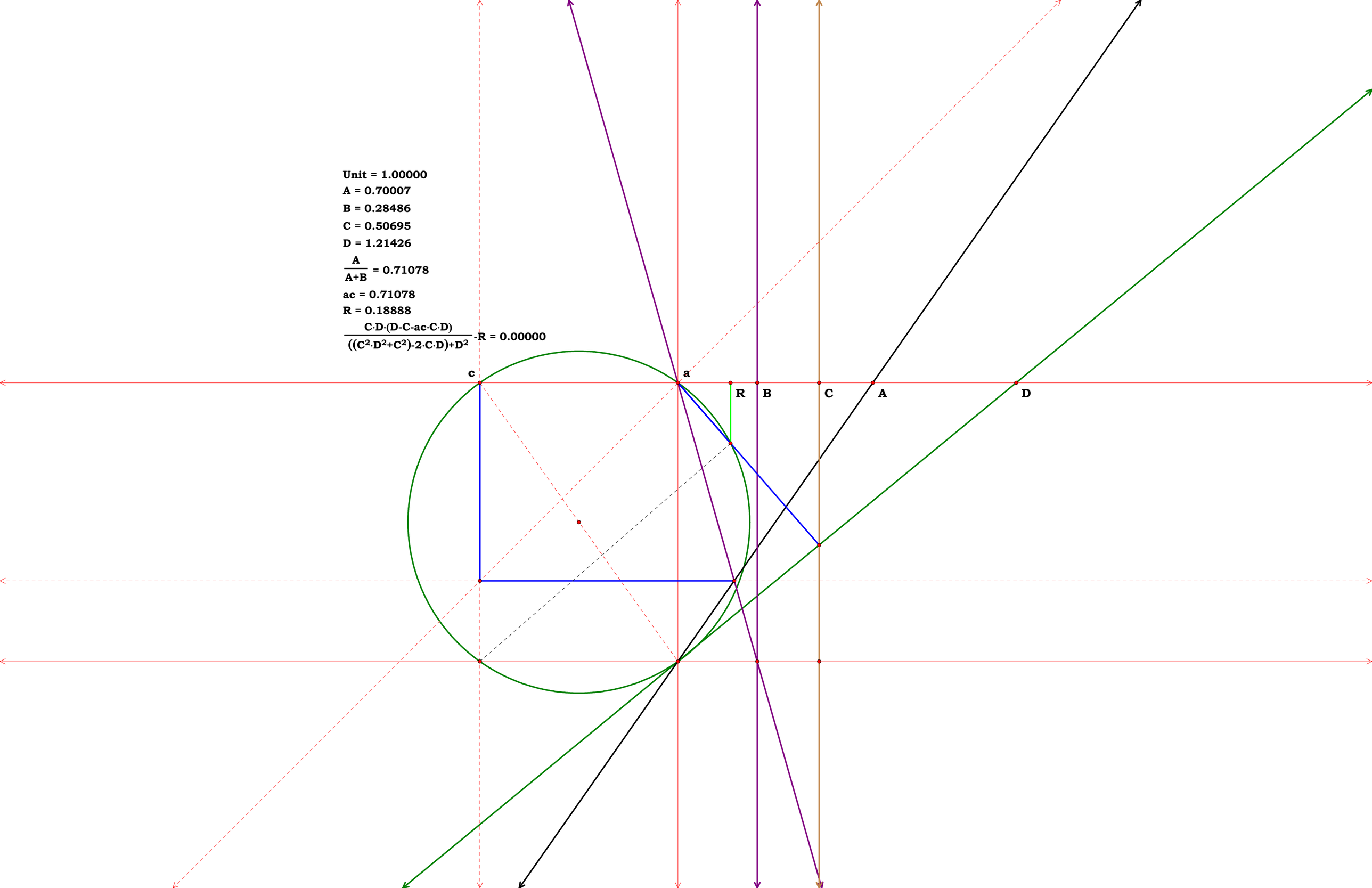
$\frac{B}{A}$ = 0.68448

ac = 0.68448

R = 0.26295

$\frac{C \cdot D \cdot (D-C-ac \cdot C \cdot D)}{((C^2 \cdot D^2+C^2)-2 \cdot C \cdot D)+D^2}$ -R = 0.00000

c a R C B A D


Unit = 1.00000
A = 0.70007
B = 0.28486
C = 0.50695
D = 1.21426
A/(A+B) = 0.71078
ac = 0.71078
R = 0.18888
C·D·(D-C-ac·C·D)/((C²·D²+C²)-2·C·D)+D² -R = 0.00000
c
a
R
B
C
A
D

Unit = 1.00000

A = 0.70973

B = 0.26554

C = 0.60109

D = 1.22392

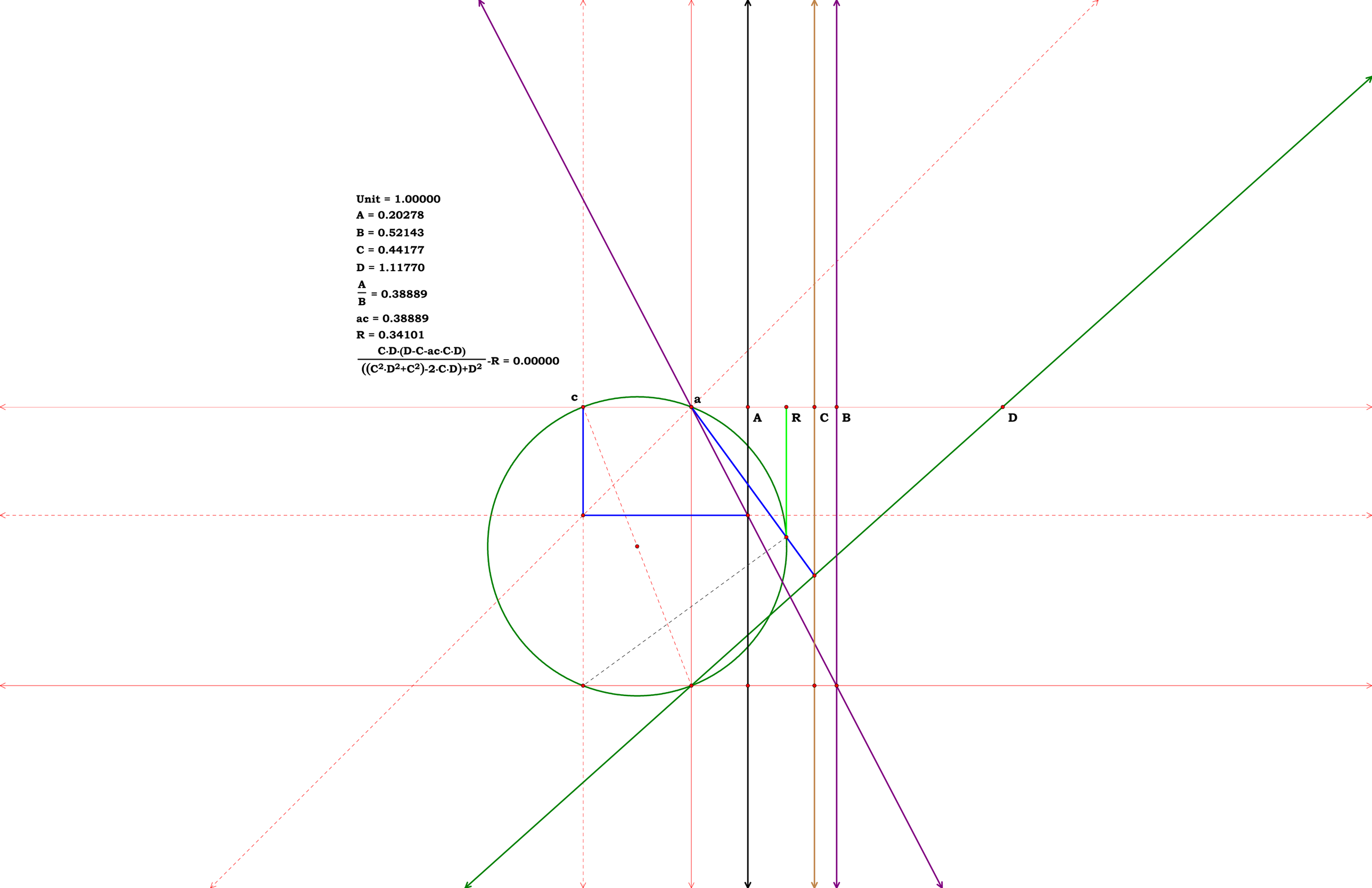
$\frac{B}{A+B} = 0.27228$

ac = 0.27228

R = 0.33454

$\frac{C \cdot D \cdot (D-C-ac \cdot C \cdot D)}{((C^2 \cdot D^2+C^2)-2 \cdot C \cdot D)+D^2} - R = 0.00000$

c a B R C A D


Unit = 1.00000
A = 0.20278
B = 0.52143
C = 0.44177
D = 1.11770
A/B = 0.38889
ac = 0.38889
R = 0.34101
C·D·(D-C-ac·C·D)/((C²·D²+C²)-2·C·D)+D² -R = 0.00000
c
a
A
R
C
B
D

Unit = 1.00000

A = 0.44177

B = 0.73869

C = 0.61075

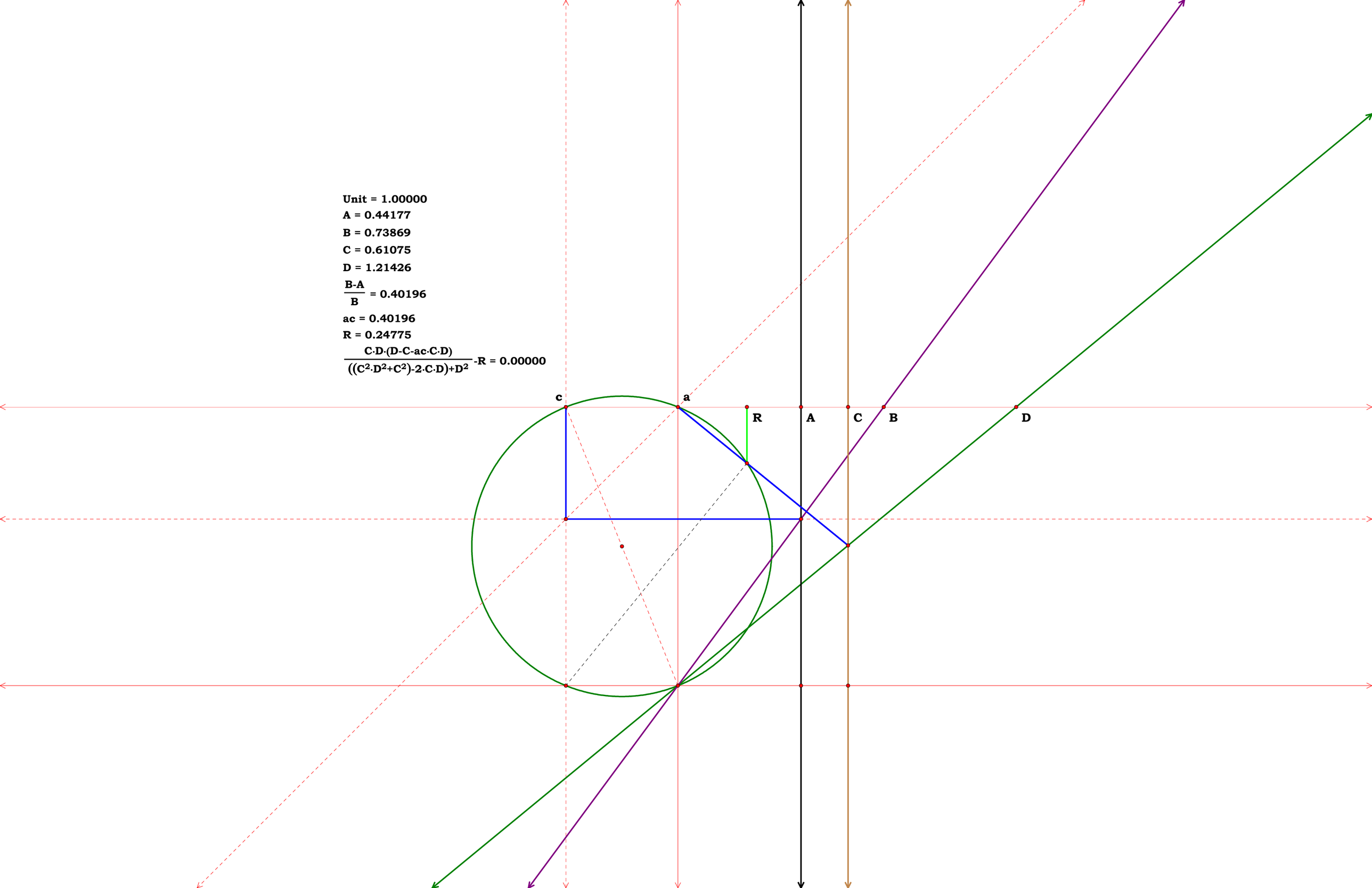
D = 1.21426

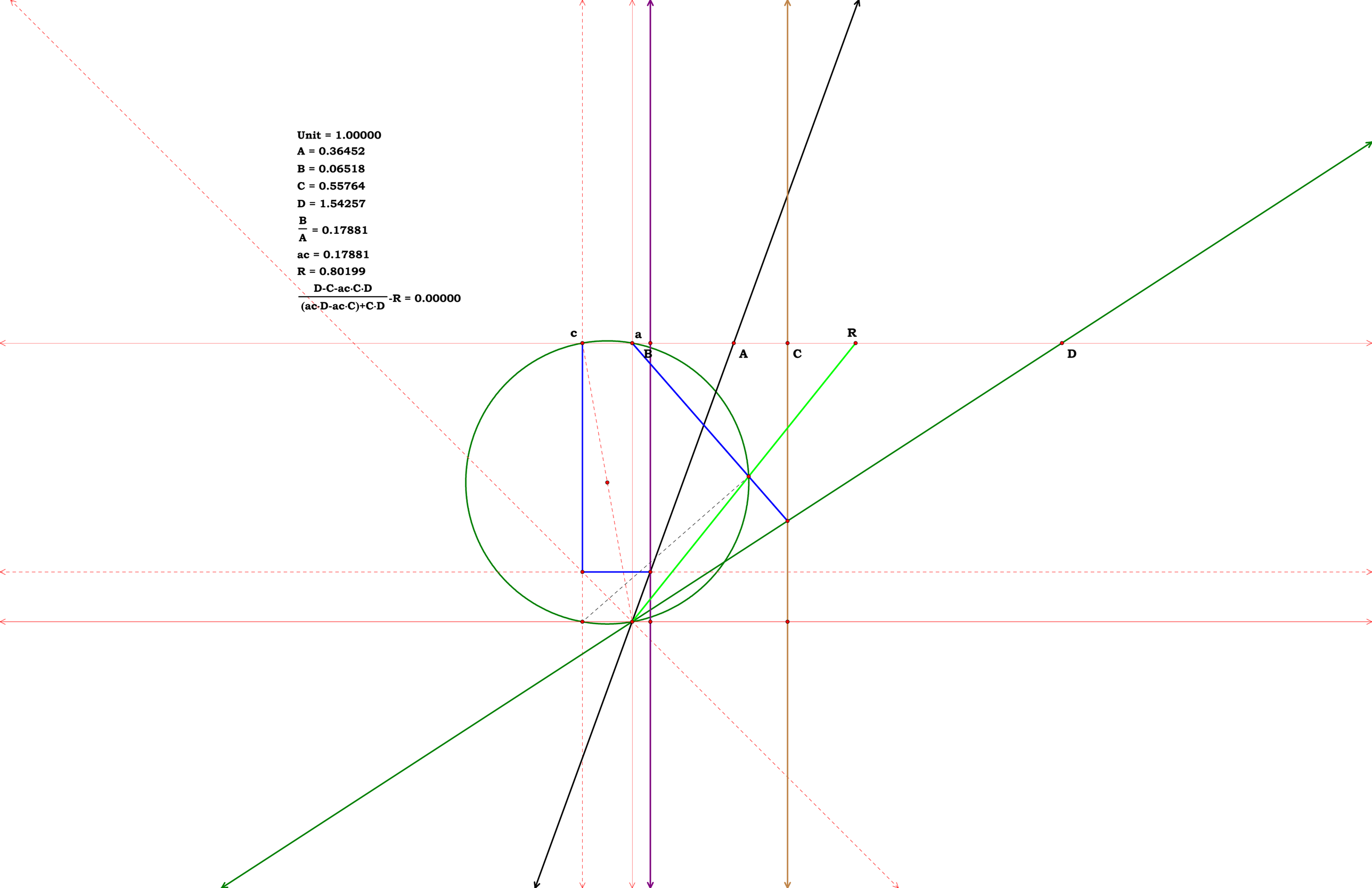
$\frac{B-A}{B}$ = 0.40196

ac = 0.40196

R = 0.24775

$\frac{C \cdot D \cdot (D-C-ac \cdot C \cdot D)}{((C^2 \cdot D^2+C^2)-2 \cdot C \cdot D)+D^2}$ -R = 0.00000




Unit = 1.00000
A = 0.36452
B = 0.06518
C = 0.55764
D = 1.54257
B/A = 0.17881
ac = 0.17881
R = 0.80199
(D-C-ac·C·D)/(ac·D-ac·C)+C·D -R = 0.00000
c
a
B
A
C
R
D

Unit = 1.00000

A = 0.38142

B = 0.29934

C = 0.48764

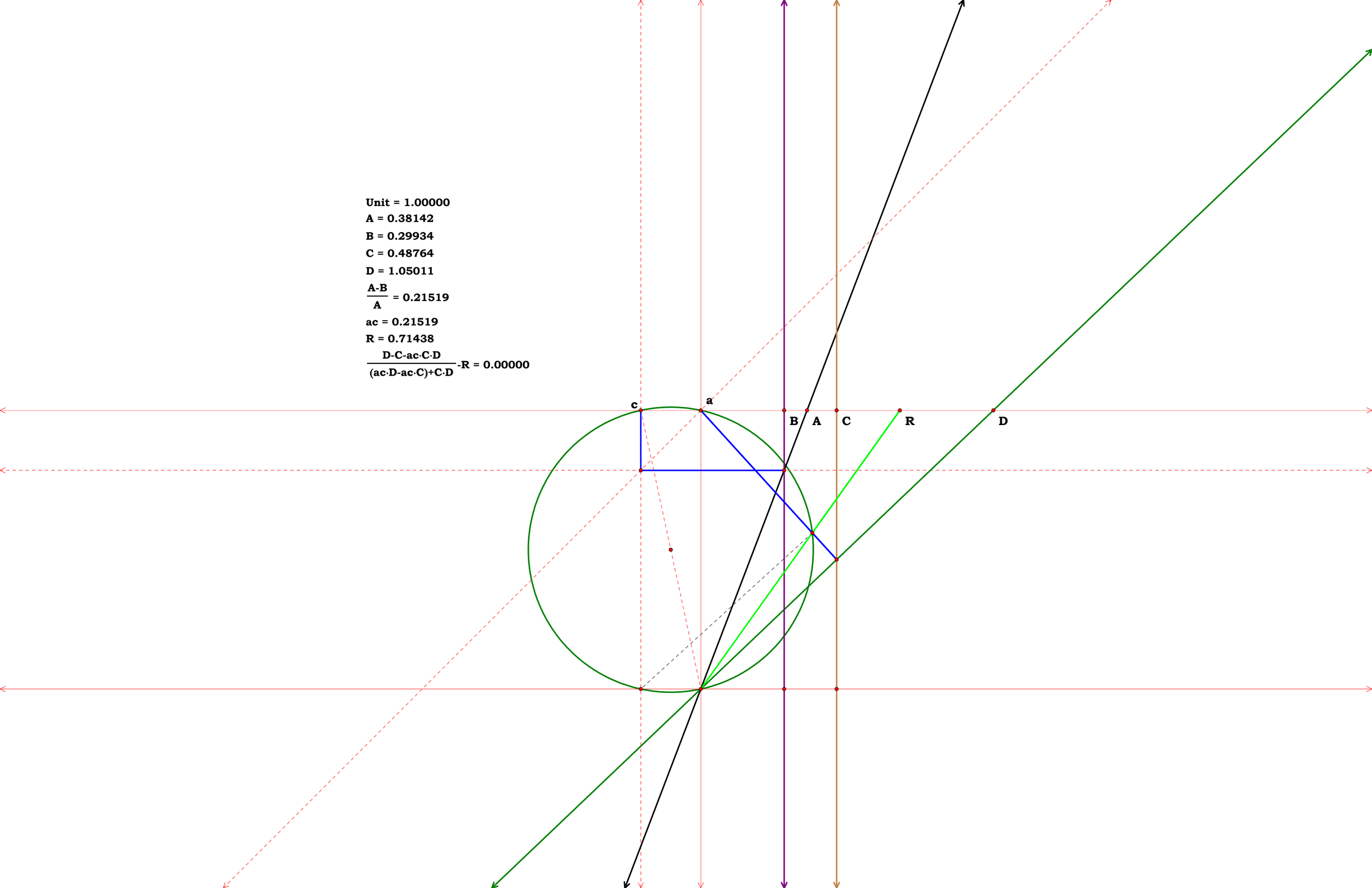
D = 1.05011

$\frac{A-B}{A}$ = 0.21519

ac = 0.21519

R = 0.71438

$\frac{D-C-ac \cdot C \cdot D}{(ac \cdot D - ac \cdot C)+C \cdot D}-R$ = 0.00000



Unit = 1.00000

A = 0.29451

B = 0.76042

C = 0.57937

D = 1.20219

$\frac{A}{A+B}$ = 0.27918

ac = 0.27918

R = 0.49216

$\frac{D-C-ac\cdot C\cdot D}{(ac\cdot D-ac\cdot C)+C\cdot D}$ -R = 0.00000

c a A R C B D

Unit = 1.00000

A = 0.74352

B = 0.48281

C = 0.58420

D = 1.25047

$\frac{B}{A+B}$ = 0.39370

ac = 0.39370

R = 0.38140

$\frac{D-C-ac\cdot C\cdot D}{(ac\cdot D-ac\cdot C)+C\cdot D}$ -R = 0.00000

c a R B C A D

Unit = 1.00000

A = 0.43211

B = 0.88112

C = 0.56006

D = 1.16357

$\frac{A}{B}$ = 0.49041

ac = 0.49041

R = 0.29962

$\frac{D-C-ac\cdot C\cdot D}{(ac\cdot D-ac\cdot C)+C\cdot D}-R$ = 0.00000

c

a

R

A

C

B

D

Unit = 1.00000

A = 0.20761

B = 0.29693

C = 0.45867

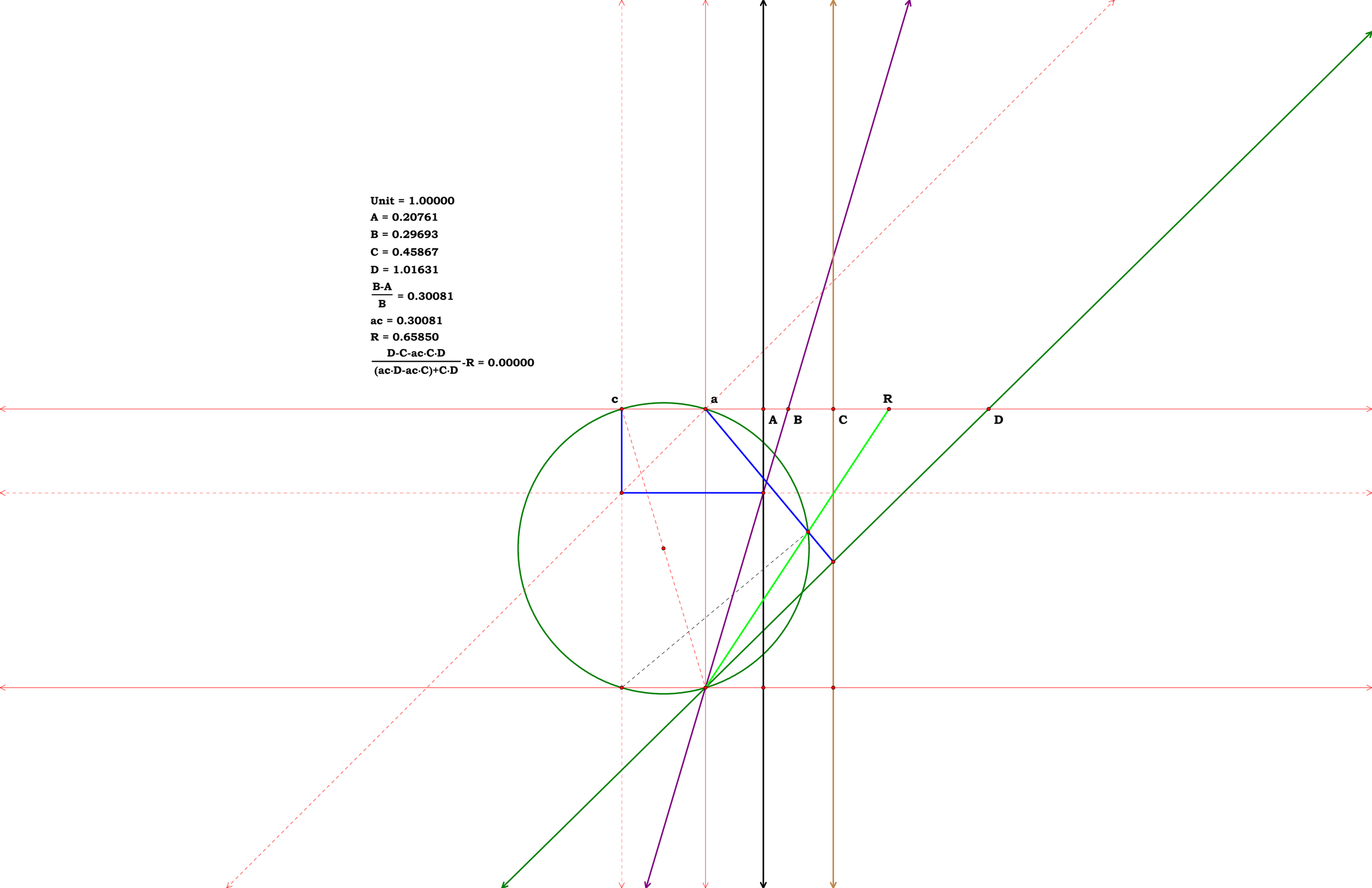
D = 1.01631

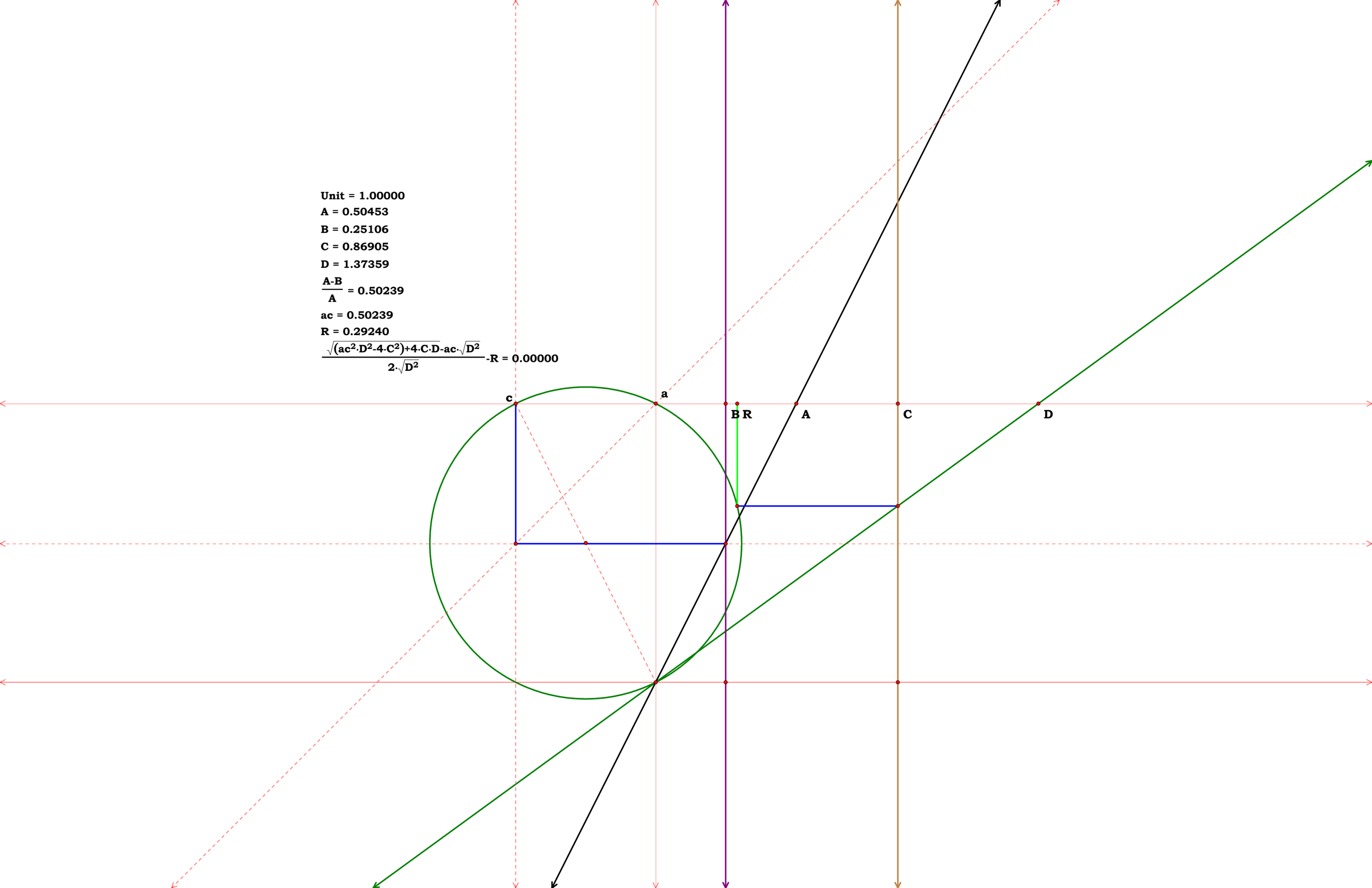
$\frac{B-A}{B}$ = 0.30081

ac = 0.30081

R = 0.65850

$\frac{D-C-ac\cdot C\cdot D}{(ac\cdot D-ac\cdot C)+C\cdot D}$-R = 0.00000




Unit = 1.00000
A = 0.50453
B = 0.25106
C = 0.86905
D = 1.37359
(A-B)/A = 0.50239
ac = 0.50239
R = 0.29240
(√((ac²·D²-4·C²)+4·C·D)-ac·√D²)/(2·√D²)-R = 0.00000
c
a
B
R
A
C
D

Unit = 1.00000

A = 0.99217

B = 0.43211

C = -0.24623

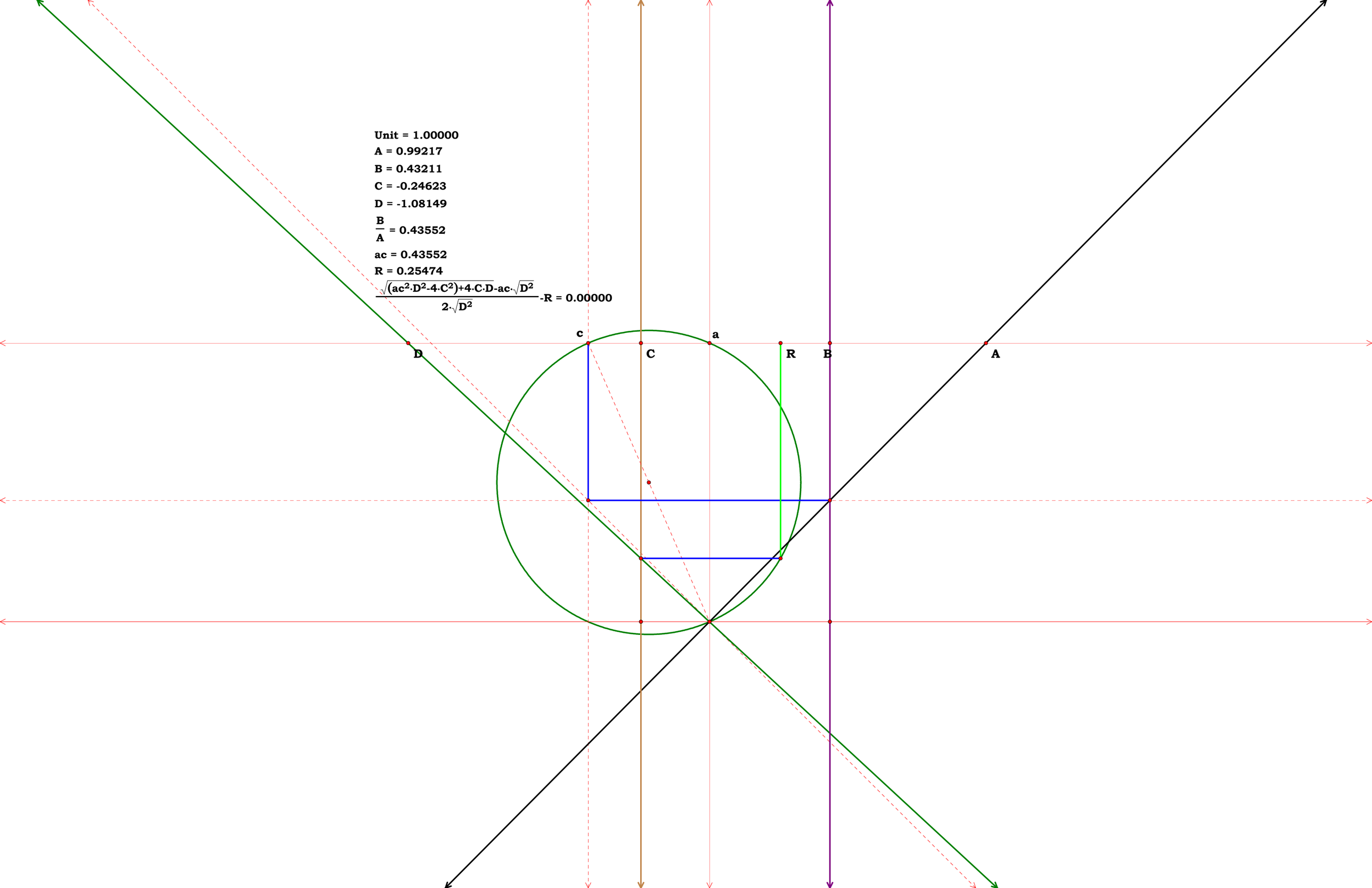
D = -1.08149

$\frac{B}{A}$ = 0.43552

ac = 0.43552

R = 0.25474

$\frac{\sqrt{(ac^2 \cdot D^2 - 4 \cdot C^2) + 4 \cdot C \cdot D} - ac \cdot \sqrt{D^2}}{2 \cdot \sqrt{D^2}}$ -R = 0.00000



Unit = 1.00000

A = 0.21485

B = 0.68559

C = 0.87629

D = 1.67051

$\frac{A}{A+B}$ = 0.23861

ac = 0.23861

R = 0.39415

$\frac{\sqrt{(ac^2 \cdot D^2 - 4 \cdot C^2) + 4 \cdot C \cdot D} - ac \cdot \sqrt{D^2}}{2 \cdot \sqrt{D^2}}$ -R = 0.00000

c

a

A

R

B

C

D

Unit = 1.00000

A = 0.54557

B = 0.15933

C = 0.77491

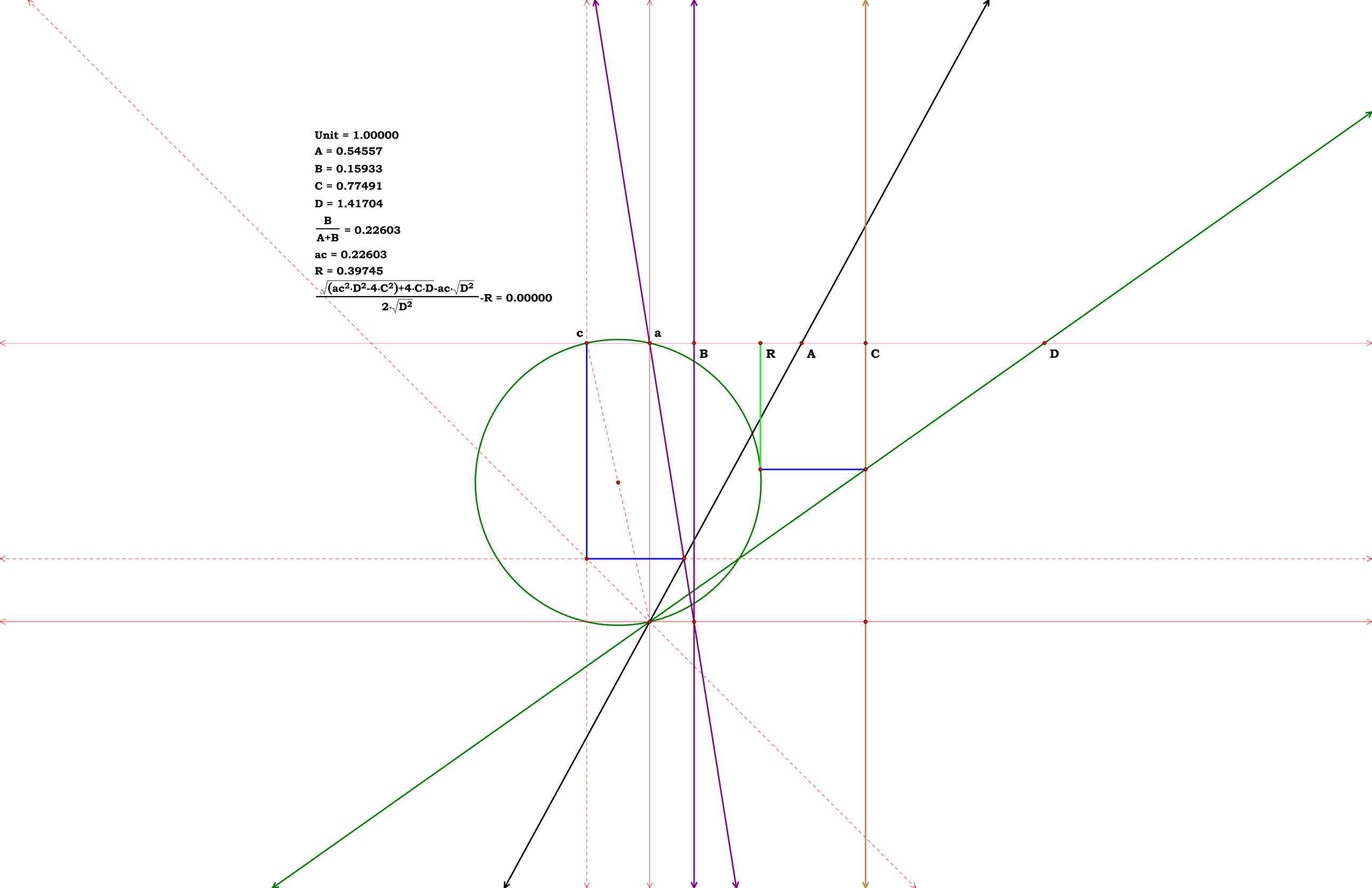
D = 1.41704

$\frac{B}{A+B}$ = 0.22603

ac = 0.22603

R = 0.39745

$\frac{\sqrt{(ac^2 \cdot D^2 - 4 \cdot C^2) + 4 \cdot C \cdot D} - ac \cdot \sqrt{D^2}}{2 \cdot \sqrt{D^2}} - R$ = 0.00000



Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 1.13218

$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 0.31241

$\frac{\sqrt{(ac^2 \cdot D^2 - 4 \cdot C^2) + 4 \cdot C \cdot D} - ac \cdot \sqrt{D^2}}{2 \cdot \sqrt{D^2}}$ -R = 0.00000

c

a

A

R

B

C

D

Unit = 1.00000

A = 0.29693

B = 0.42487

C = 0.63731

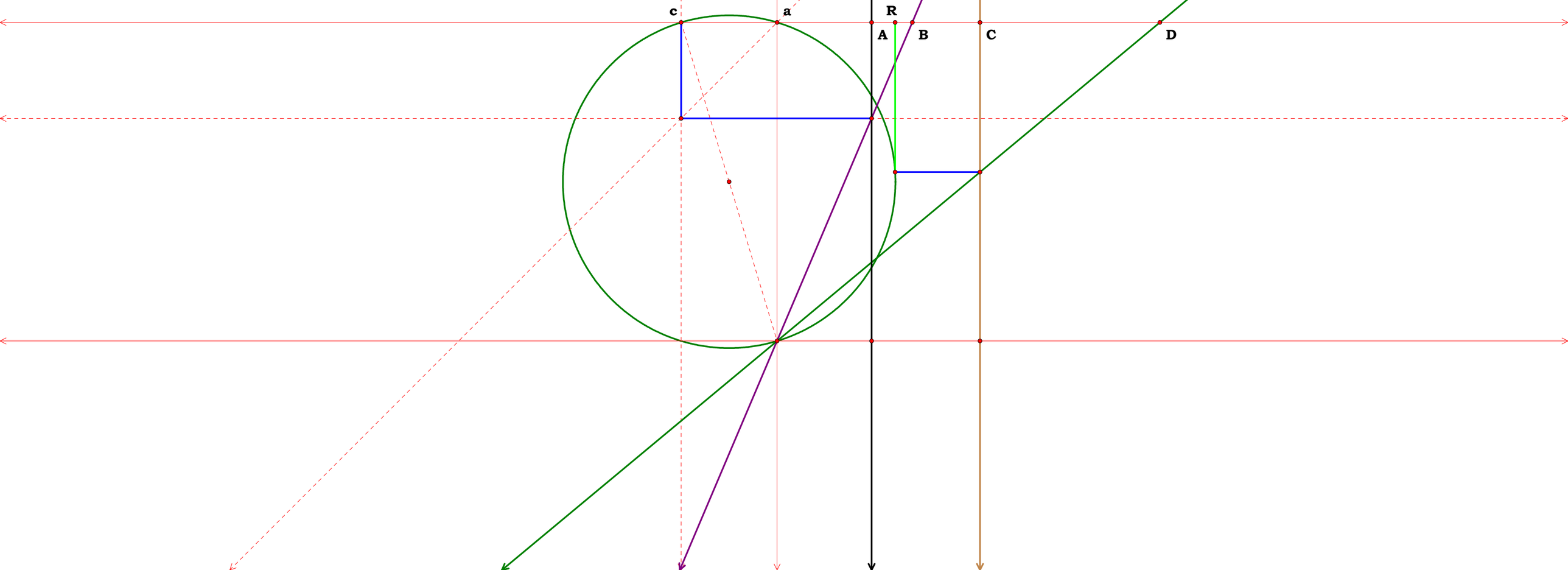
D = 1.20219

$\frac{B-A}{B}$ = 0.30114

ac = 0.30114

R = 0.37074

$\frac{\sqrt{(ac^2 \cdot D^2 - 4 \cdot C^2) + 4 \cdot C \cdot D} - ac \cdot \sqrt{D^2}}{2 \cdot \sqrt{D^2}}$ -R = 0.00000



Unit = 1.00000

A = 0.49246

B = 0.25589

C = 0.78698

D = 1.01872

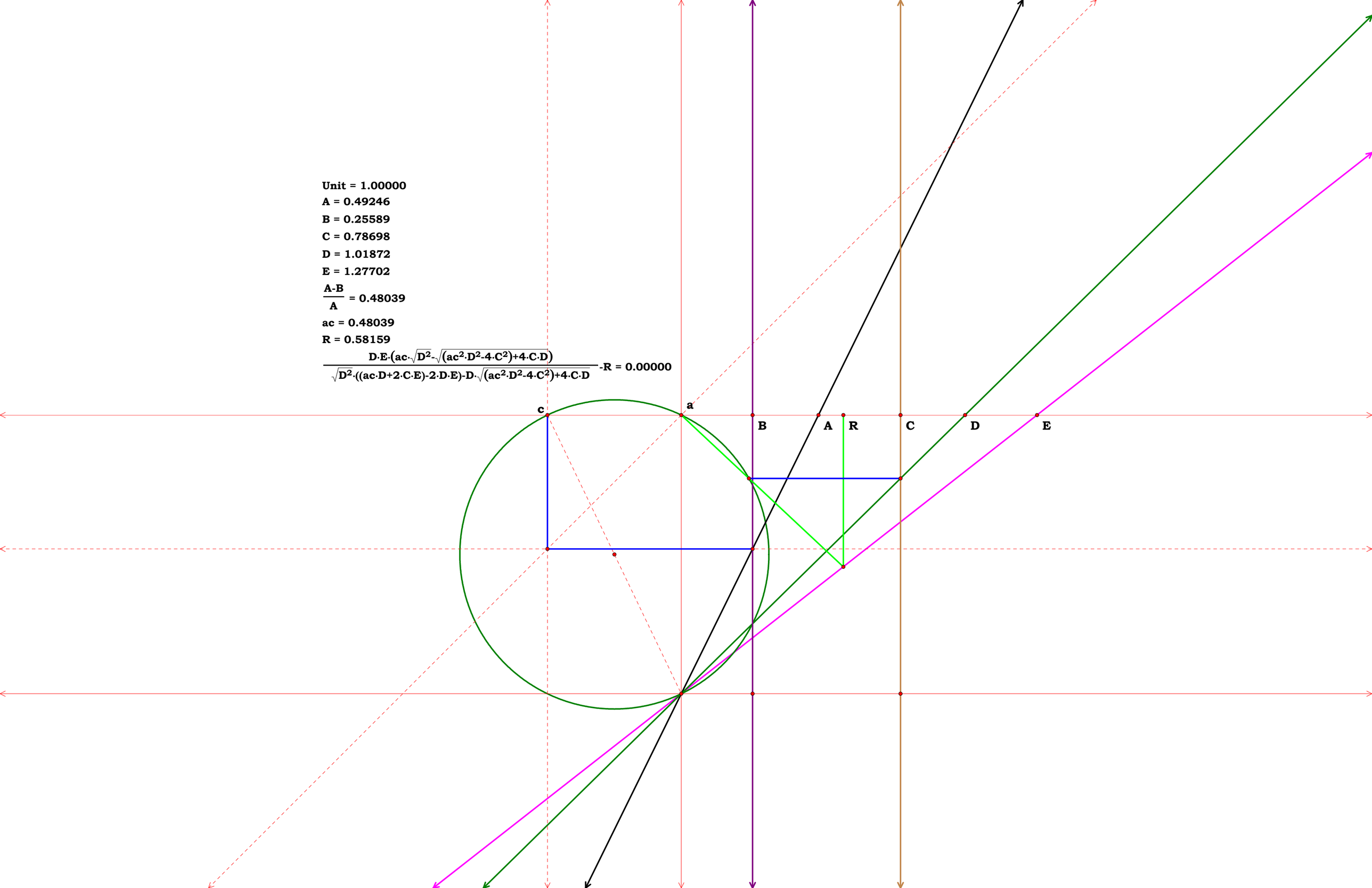
E = 1.27702

$\frac{A-B}{A}$ = 0.48039

ac = 0.48039

R = 0.58159

$$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2\cdot((ac\cdot D+2\cdot C\cdot E)-2\cdot D\cdot E)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}}-R = 0.00000$$



Unit = 1.00000

A = 0.50453

B = 0.21726

C = 0.86905

D = 1.19012

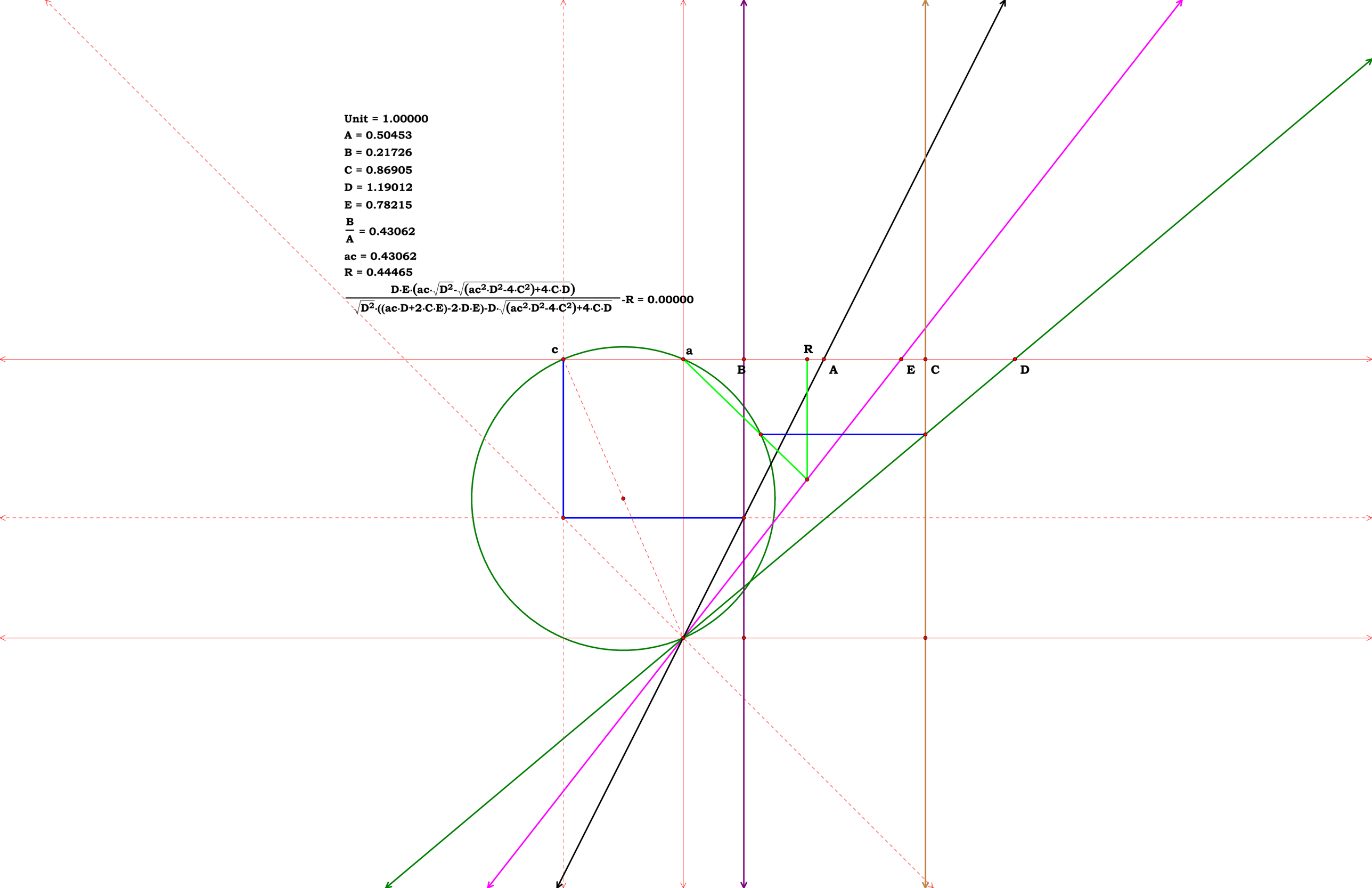
E = 0.78215

$\frac{B}{A}$ = 0.43062

ac = 0.43062

R = 0.44465

$$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2\cdot\left(\left(ac\cdot D+2\cdot C\cdot E\right)-2\cdot D\cdot E\right)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}}-R = 0.00000$$



Unit = 1.00000

A = 0.27761

B = 0.50453

C = 1.25047

D = 1.86364

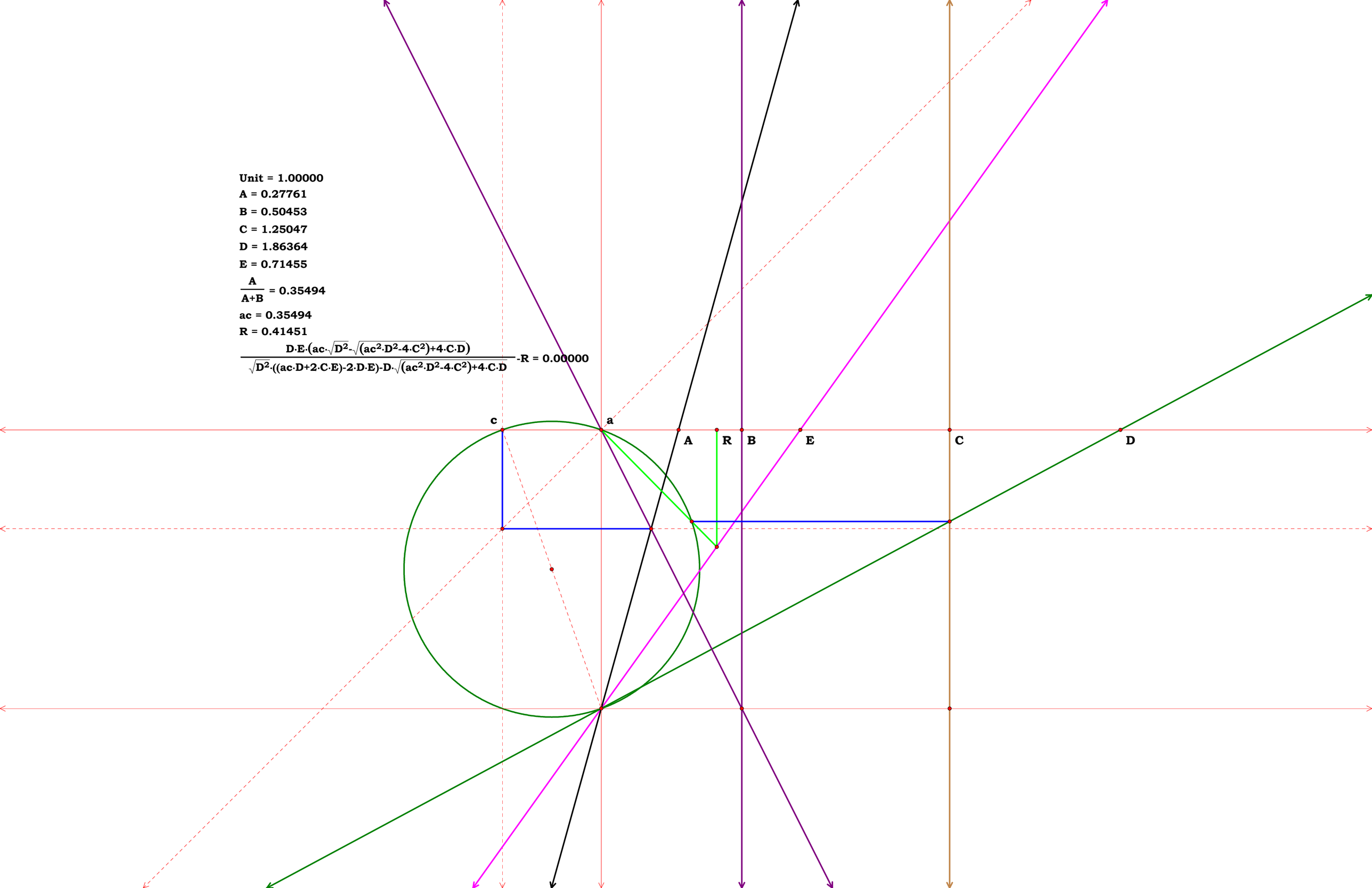
E = 0.71455

$\frac{A}{A+B} = 0.35494$

ac = 0.35494

R = 0.41451

$$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2\cdot((ac\cdot D+2\cdot C\cdot E)-2\cdot D\cdot E)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}}-R = 0.00000$$



Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.55764

D = 1.27944

E = 0.96320

$\frac{B}{A+B}$ = 0.63529

ac = 0.63529

R = 0.32071

$$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2}\cdot((ac\cdot D+2\cdot C\cdot E)-2\cdot D\cdot E)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}-R = 0.00000$$

c a A R B C E D

Unit = 1.00000

A = 0.11105

B = 0.67110

C = 0.55764

D = 1.20702

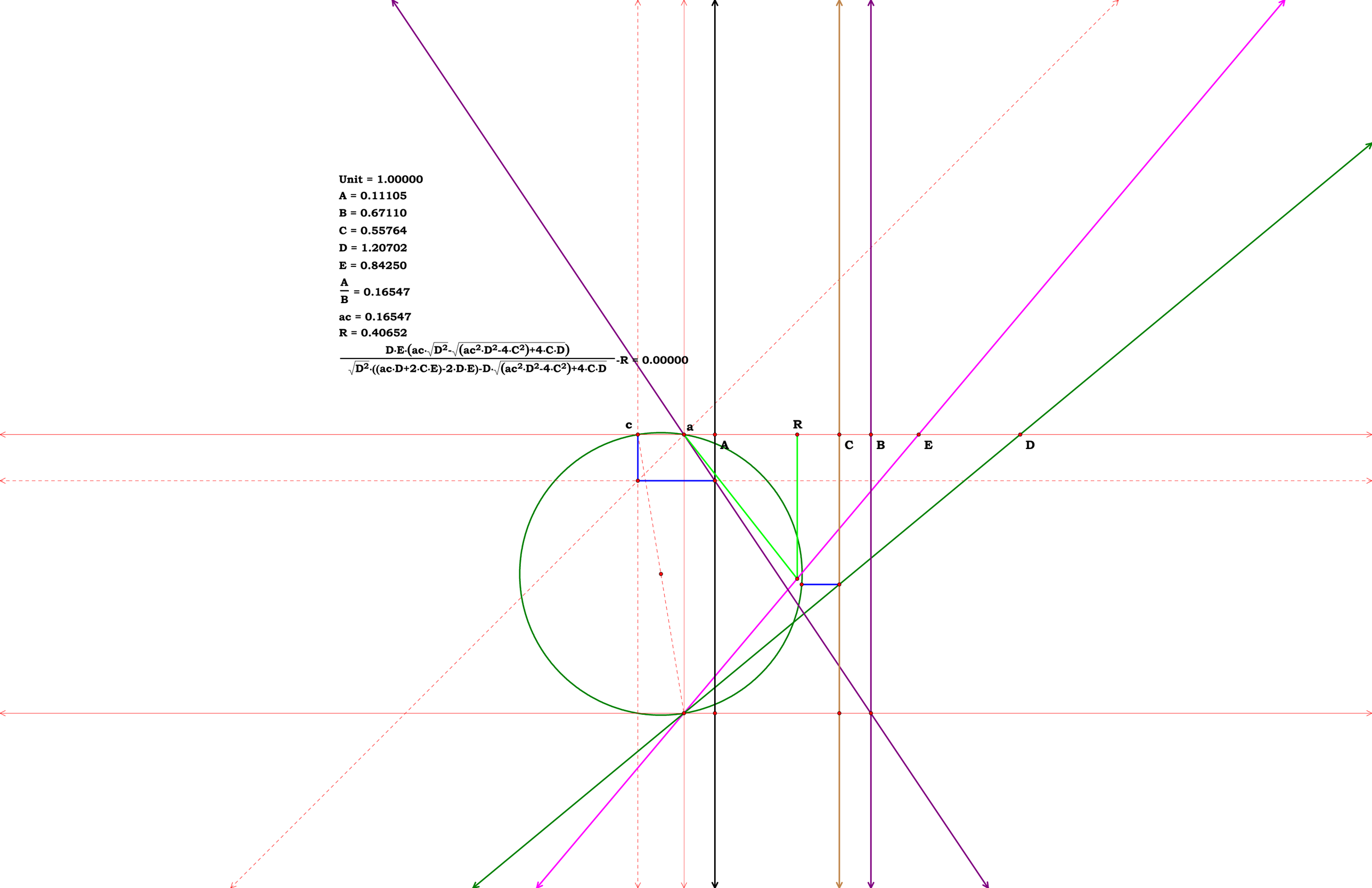
E = 0.84250

$\frac{A}{B}$ = 0.16547

ac = 0.16547

R = 0.40652

$$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2\cdot\left(\left(ac\cdot D+2\cdot C\cdot E\right)-2\cdot D\cdot E\right)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}}-R = 0.00000$$



Unit = 1.00000

A = 0.24382

B = 0.43935

C = 0.55764

D = 1.41221

E = 0.85698

$\frac{B-A}{B}$ = 0.44505

ac = 0.44505

R = 0.32356

$\frac{D\cdot E\cdot\left(ac\cdot\sqrt{D^2}-\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}\right)}{\sqrt{D^2}\cdot((ac\cdot D+2\cdot C\cdot E)-2\cdot D\cdot E)-D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}}$ -R = 0.00000

c a R A B C E D

Unit = 1.00000

A = 0.29934

B = 0.14967

C = 0.58178

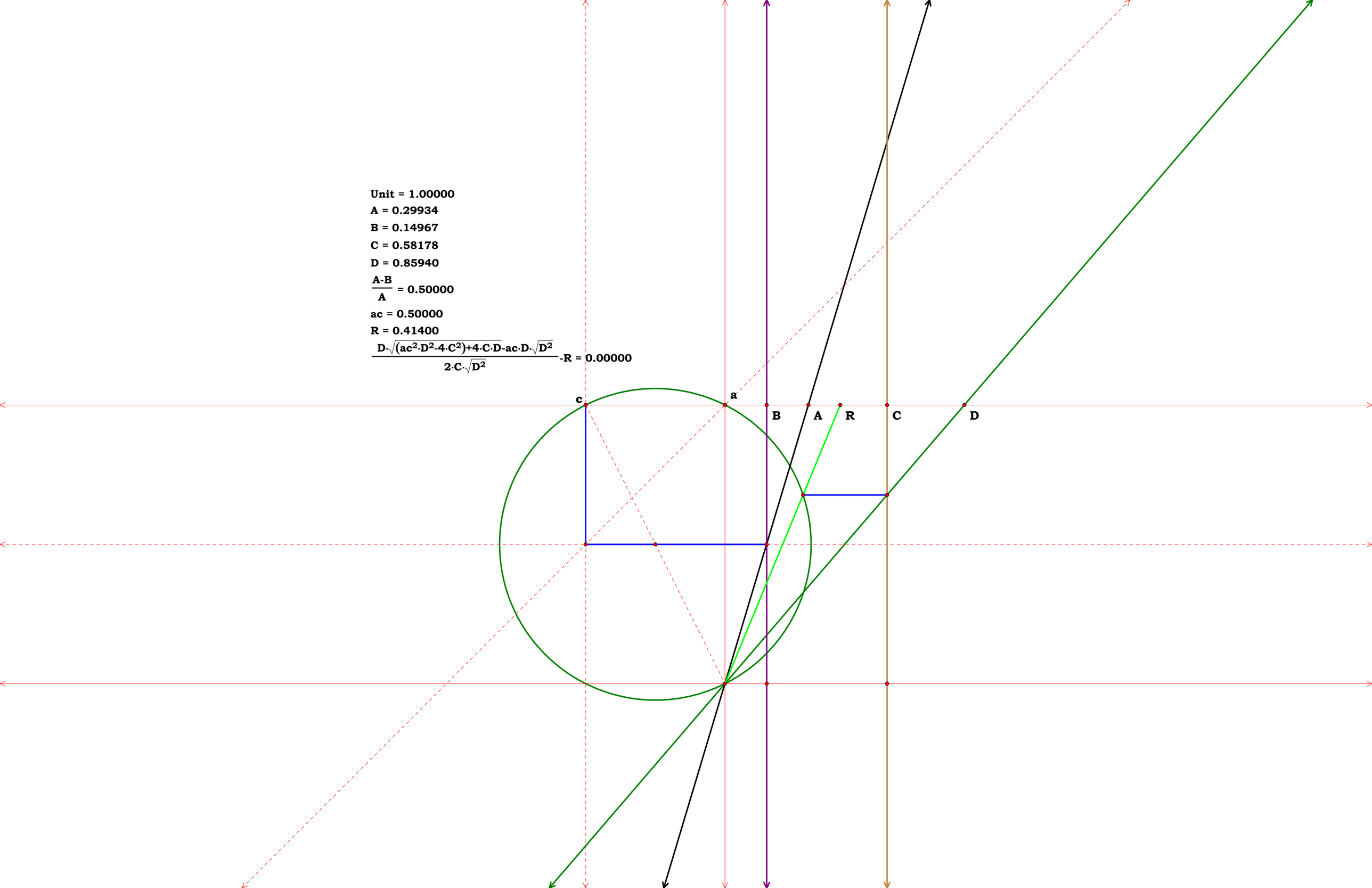
D = 0.85940

$\frac{A-B}{A}$ = 0.50000

ac = 0.50000

R = 0.41400

$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}$-R = 0.00000



Unit = 1.00000

A = 0.39107

B = 0.19071

C = 0.64938

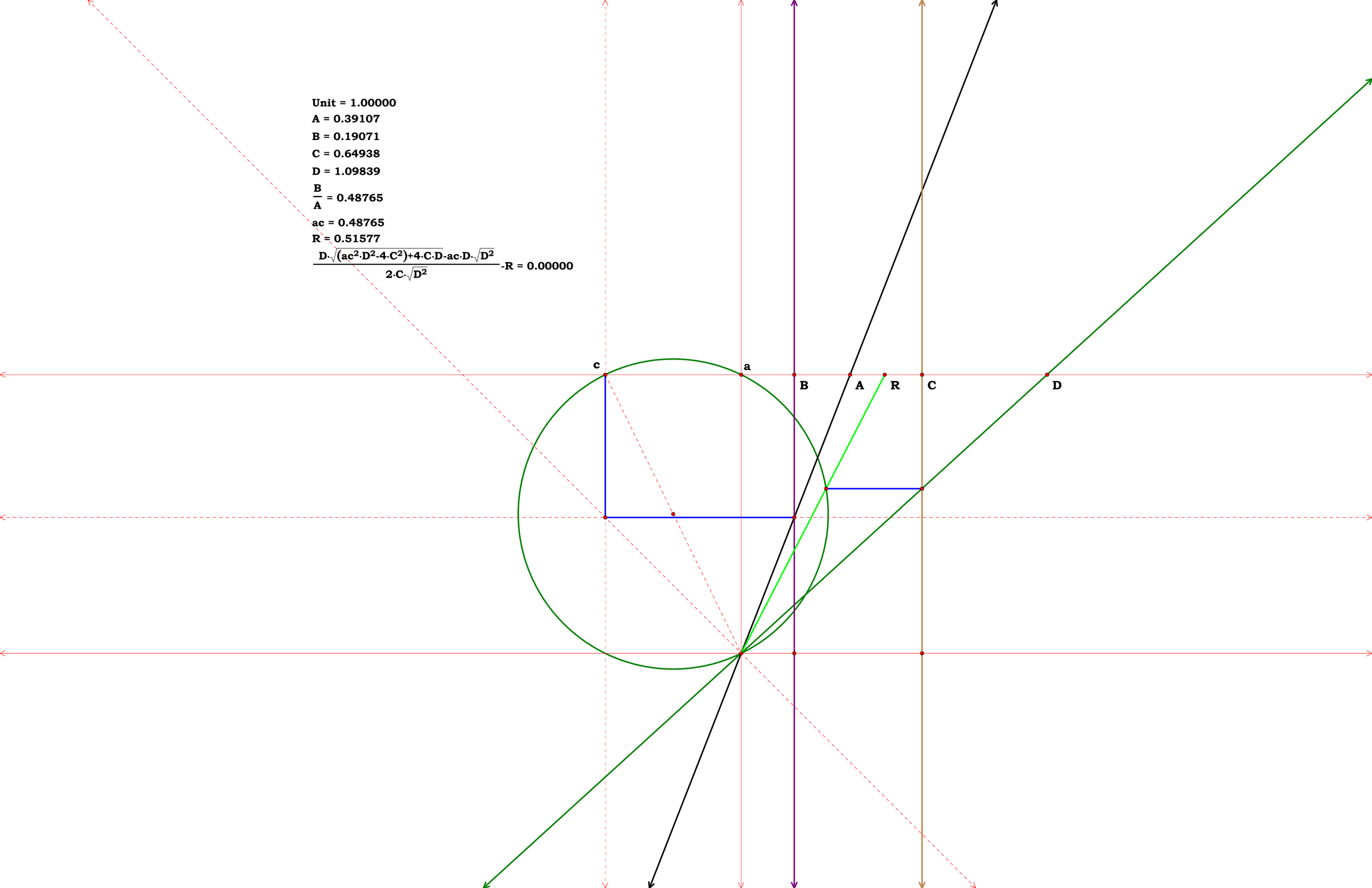
D = 1.09839

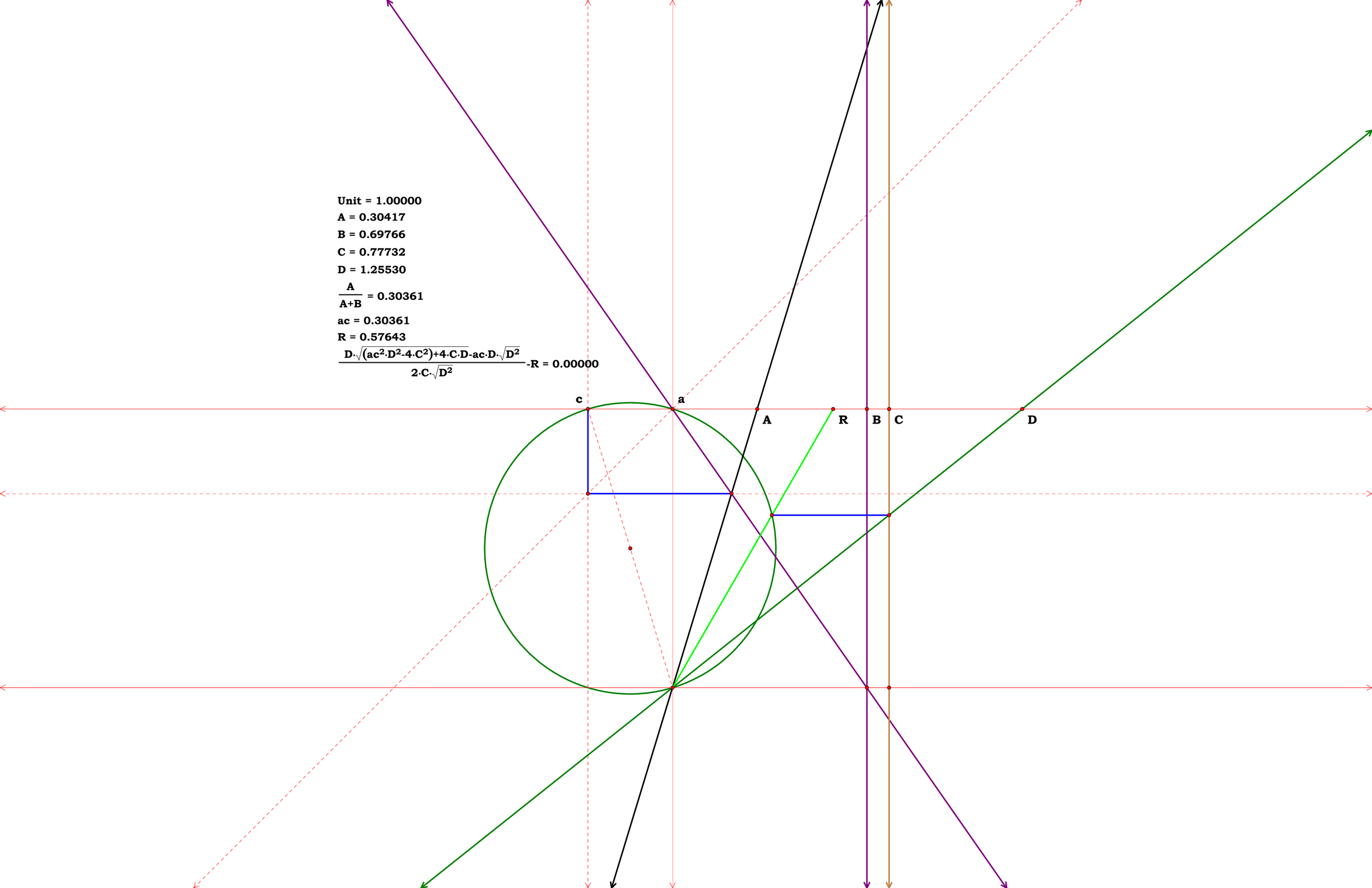
$\frac{B}{A}$ = 0.48765

ac = 0.48765

R = 0.51577

$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}$-R = 0.00000




Unit = 1.00000
A = 0.30417
B = 0.69766
C = 0.77732
D = 1.25530
$\frac{A}{A+B}$ = 0.30361
ac = 0.30361
R = 0.57643
$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}$-R = 0.00000
c
a
A
R
B
C
D

Unit = 1.00000

A = 0.49488

B = 0.26796

C = 0.56006

D = 1.15391

$\frac{B}{A+B} = 0.35127$

ac = 0.35127

R = 0.72960

$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}-R = 0.00000$

c

a

B

A

C

R

D

Unit = 1.00000

A = 0.19071

B = 0.64696

C = 0.85457

D = 1.25047

$\frac{A}{B}$ = 0.29478

ac = 0.29478

R = 0.49833

$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}$ -R = 0.00000

c

a

A

R

B

C

D

Unit = 1.00000

A = 0.30658

B = 0.39832

C = 0.49729

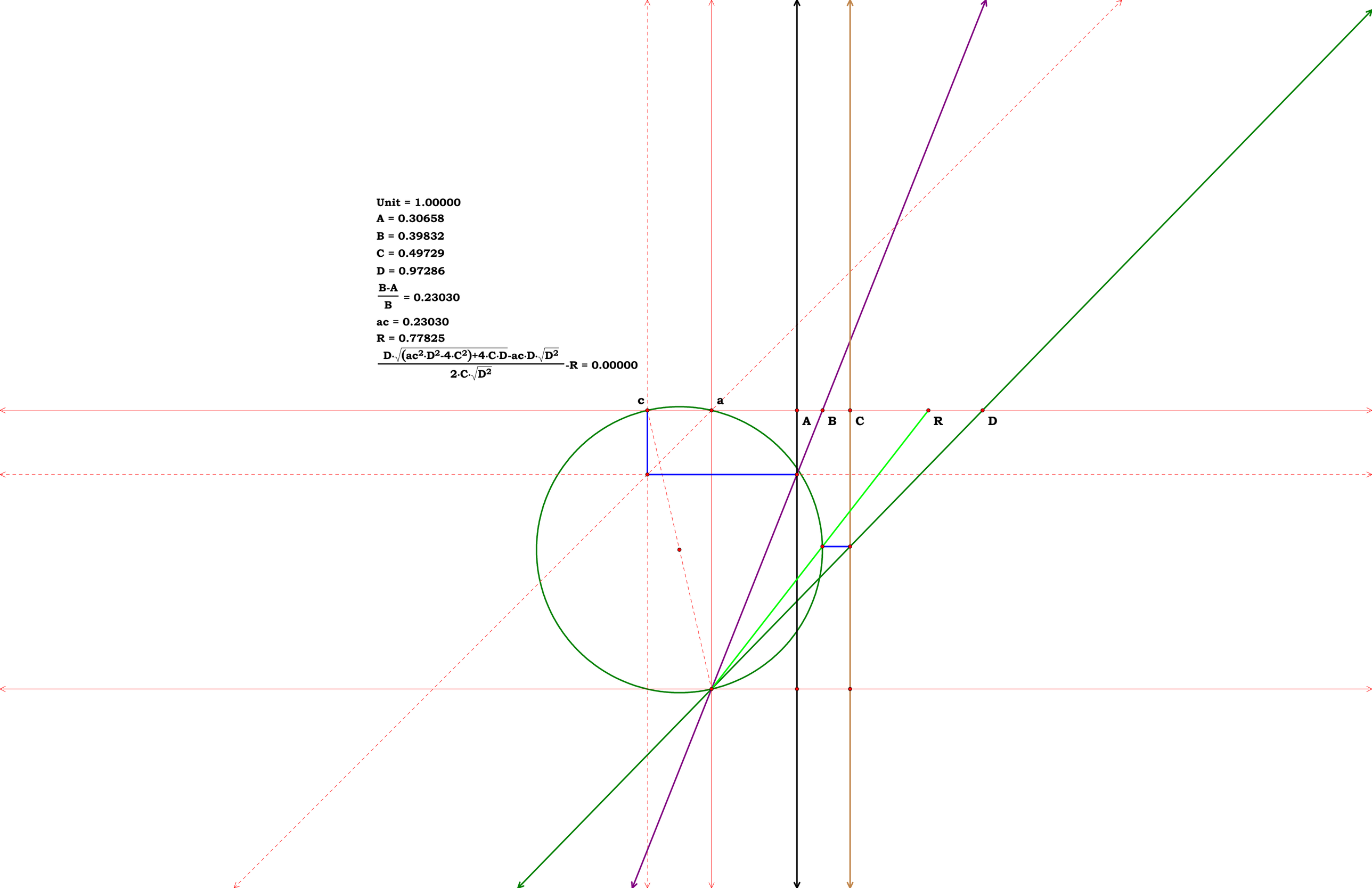
D = 0.97286

$\frac{B-A}{B}$ = 0.23030

ac = 0.23030

R = 0.77825

$\frac{D\cdot\sqrt{(ac^2\cdot D^2-4\cdot C^2)}+4\cdot C\cdot D-ac\cdot D\cdot\sqrt{D^2}}{2\cdot C\cdot\sqrt{D^2}}$-R = 0.00000



Unit = 1.00000

A = 0.41521

B = 0.14484

C = 0.55764

D = 1.24323

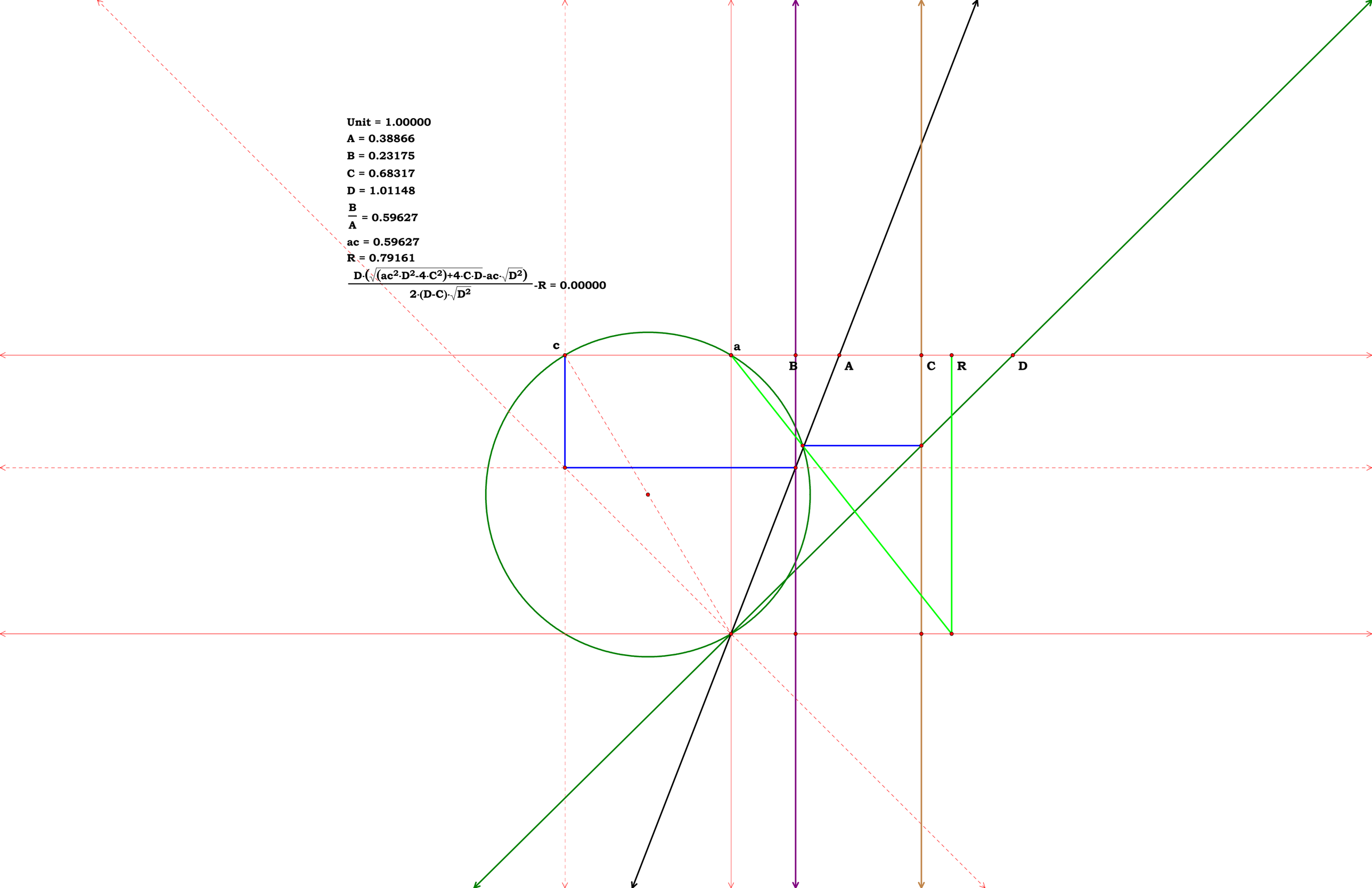
$\frac{A-B}{A}$ = 0.65116

ac = 0.65116

R = 0.48754

$\frac{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}{2\cdot(D-C)\cdot\sqrt{D^2}}$-R = 0.00000

c a B A R C D


Unit = 1.00000
A = 0.38866
B = 0.23175
C = 0.68317
D = 1.01148
B/A = 0.59627
ac = 0.59627
R = 0.79161
(D·(√((ac²·D²-4·C²)+4·C·D-ac·√(D²)))) / (2·(D-C)·√(D²)) -R = 0.00000
c
a
B
A
C
R
D

Unit = 1.00000

A = 0.30658

B = 0.58902

C = 0.82560

D = 1.63189

$\frac{A}{A+B}$ = 0.34232

ac = 0.34232

R = 0.72314

$\frac{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}{2\cdot(D-C)\cdot\sqrt{D^2}}$-R = 0.00000

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.27279

B = 0.42004

C = 0.65179

D = 1.33013

$\frac{B}{A+B} = 0.60627$

ac = 0.60627

R = 0.55197

$\frac{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}{2\cdot(D-C)\cdot\sqrt{D^2}}-R = 0.00000$

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.32107

B = 0.45142

C = 0.70731

D = 1.18771

$\frac{A}{B}$ = 0.71123

ac = 0.71123

R = 0.61925

$\frac{D\cdot\left(\sqrt{(ac^2\cdot D^2-4\cdot C^2)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}{2\cdot(D-C)\cdot\sqrt{D^2}}$-R = 0.00000

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.13036

B = 0.28968

C = 0.55764

D = 1.38324

$\frac{B-A}{B}$ = 0.55000

ac = 0.55000

R = 0.48145

$\frac{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}{2\cdot(D-C)\cdot\sqrt{D^2}}$ -R = 0.00000

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.35245

B = 0.13036

C = 0.60834

D = 0.55281

E = 0.96803

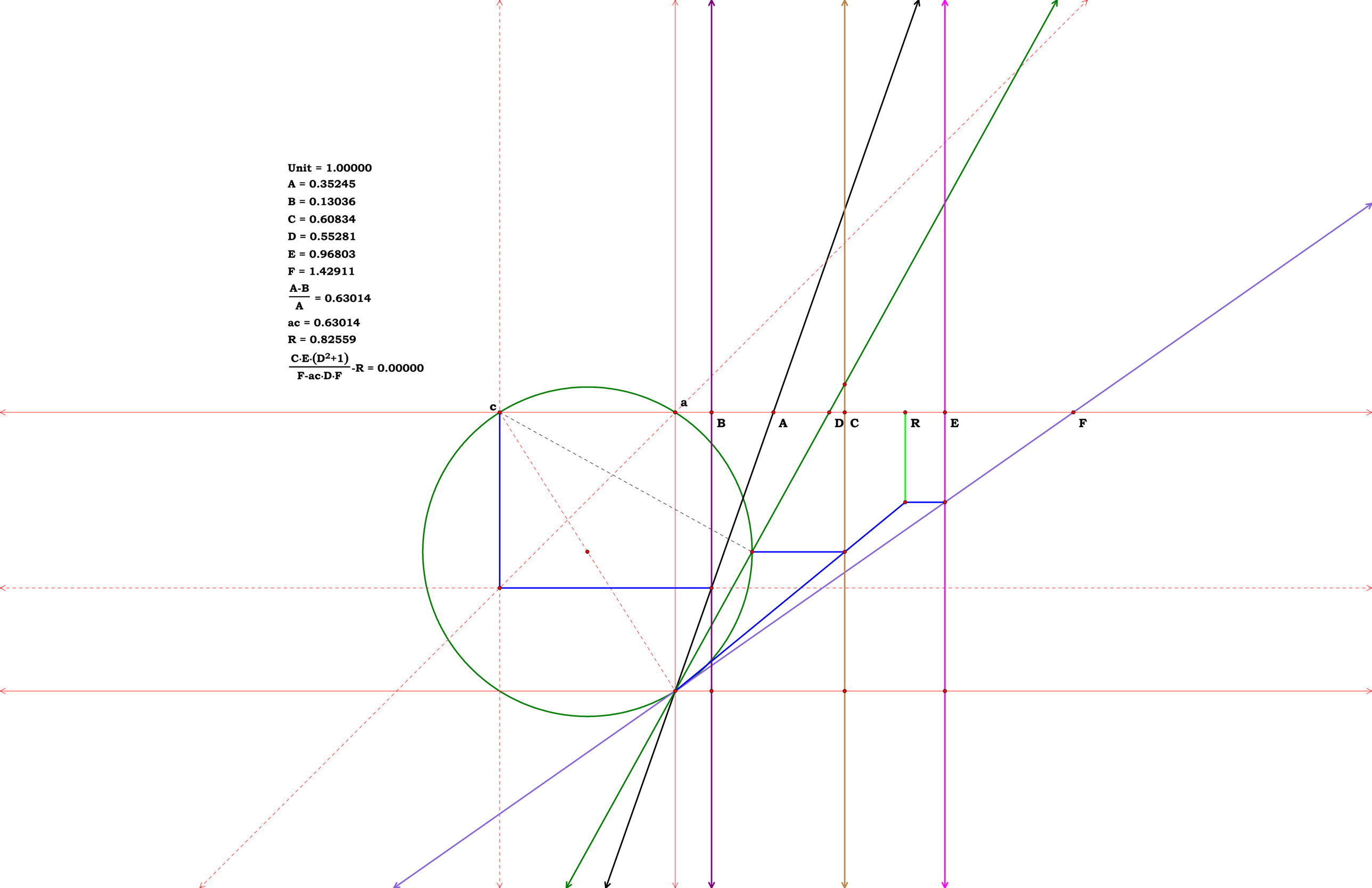
F = 1.42911

$\frac{A-B}{A}$ = 0.63014

ac = 0.63014

R = 0.82559

$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ - R = 0.00000



Unit = 1.00000

A = 0.42970

B = 0.29451

C = 0.56006

D = 0.69283

E = 0.88595

F = 1.07666

$\frac{B}{A}$ = 0.68539

ac = 0.68539

R = 1.29883

$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ -R = 0.00000

c a B A C D E F R

Unit = 1.00000

A = 0.19795

B = 0.42970

C = 0.55764

D = 0.69524

E = 1.11287

F = 1.35427

$\frac{A}{A+B}$ = 0.31538

ac = 0.31538

R = 0.87064

$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ -R = 0.00000

c a A B C D R E F

Unit = 1.00000
A = 0.26072
B = 0.43694
C = 0.55764
D = 0.75559
E = 0.85698
F = 1.13218
$\frac{B}{A+B}$ = 0.62630
ac = 0.62630
R = 1.25876
$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ -R = 0.00000

c a A B C D E F R

Unit = 1.00000

A = 0.17140

B = 0.43211

C = 0.55281

D = 0.65179

E = 1.05493

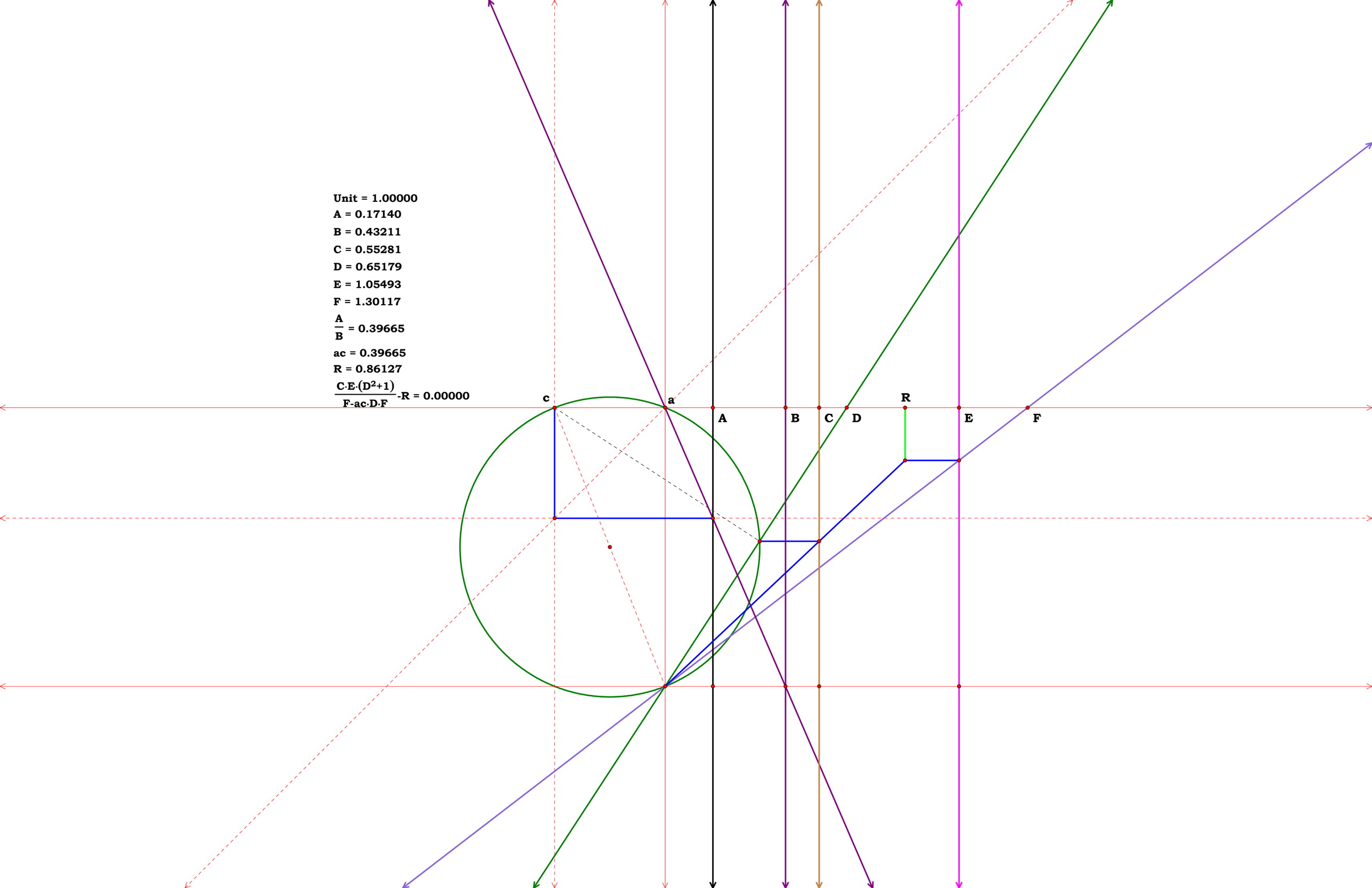
F = 1.30117

$\frac{A}{B}$ = 0.39665

ac = 0.39665

R = 0.86127

$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ -R = 0.00000



Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.62282

D = 0.70731

E = 0.86181

F = 1.19495

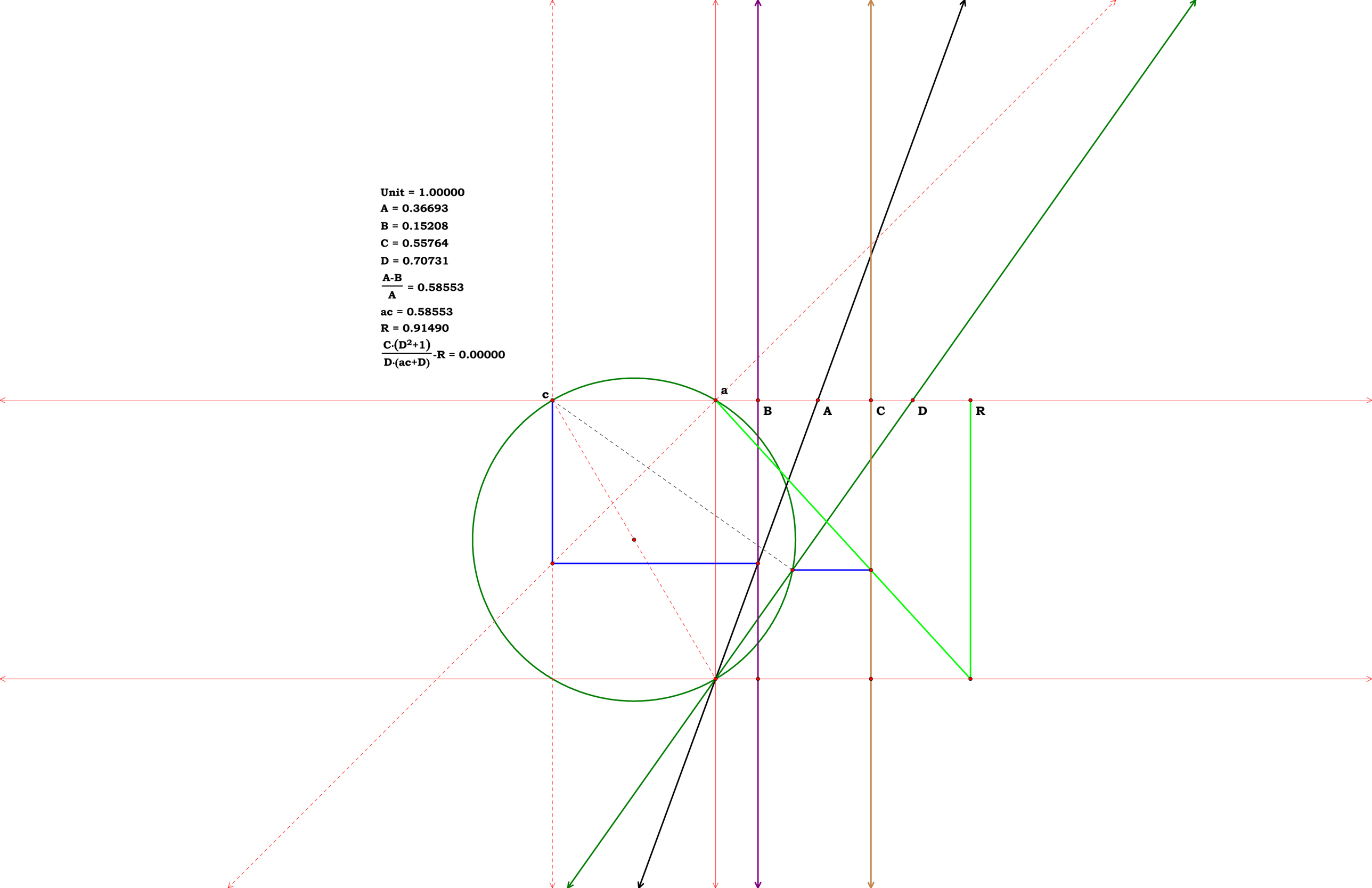
$\frac{B-A}{B}$ = 0.51235

ac = 0.51235

R = 1.05693

$\frac{C \cdot E \cdot (D^2+1)}{F-ac \cdot D \cdot F}$ -R = 0.00000

c a A B C D E R F


Unit = 1.00000
A = 0.36693
B = 0.15208
C = 0.55764
D = 0.70731
(A-B)/A = 0.58553
ac = 0.58553
R = 0.91490
C·(D²+1)/(D·(ac+D))-R = 0.00000
c
a
B
A
C
D
R

Unit = 1.00000

A = 0.49488

B = 0.31865

C = 0.55764

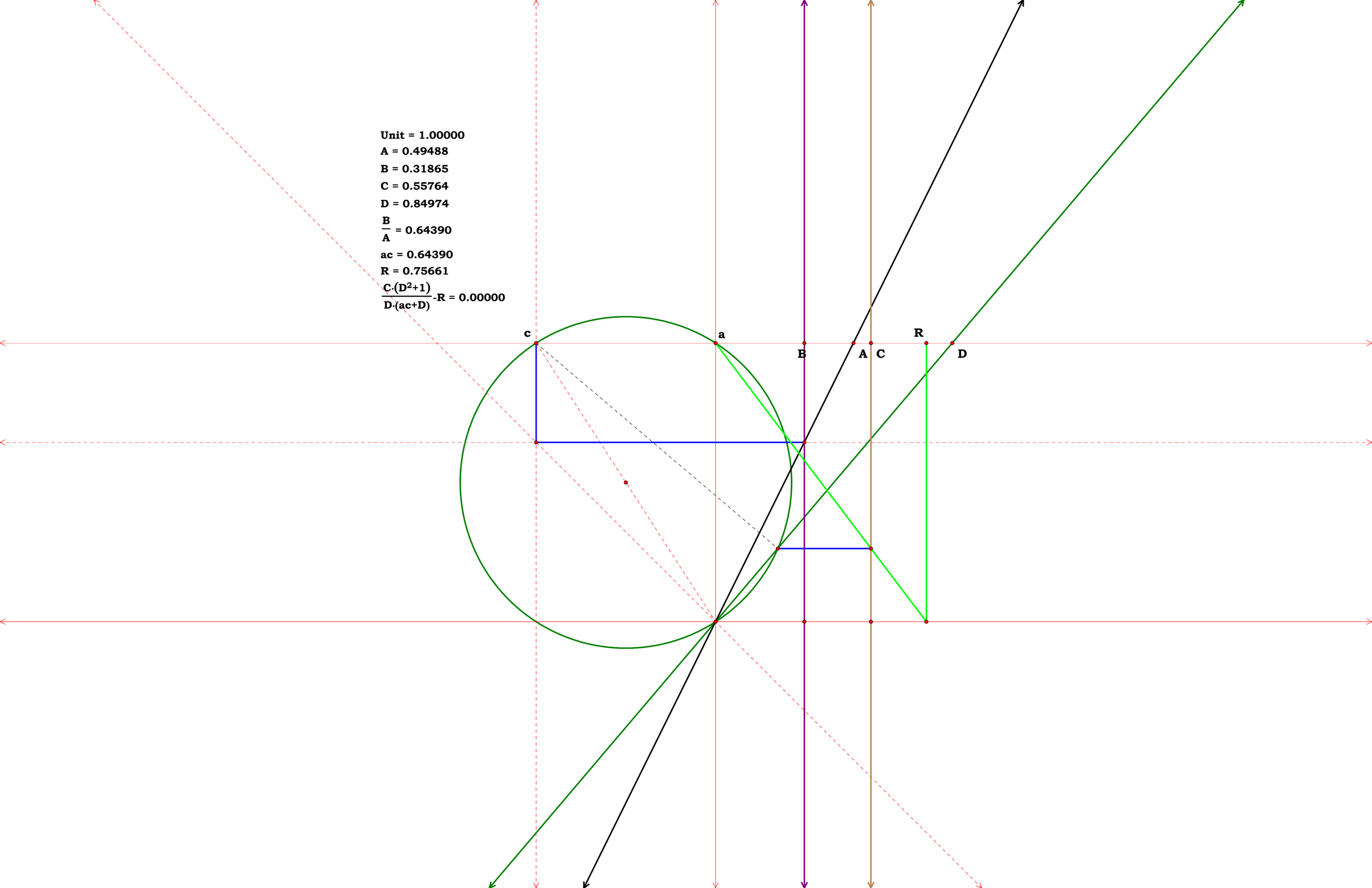
D = 0.84974

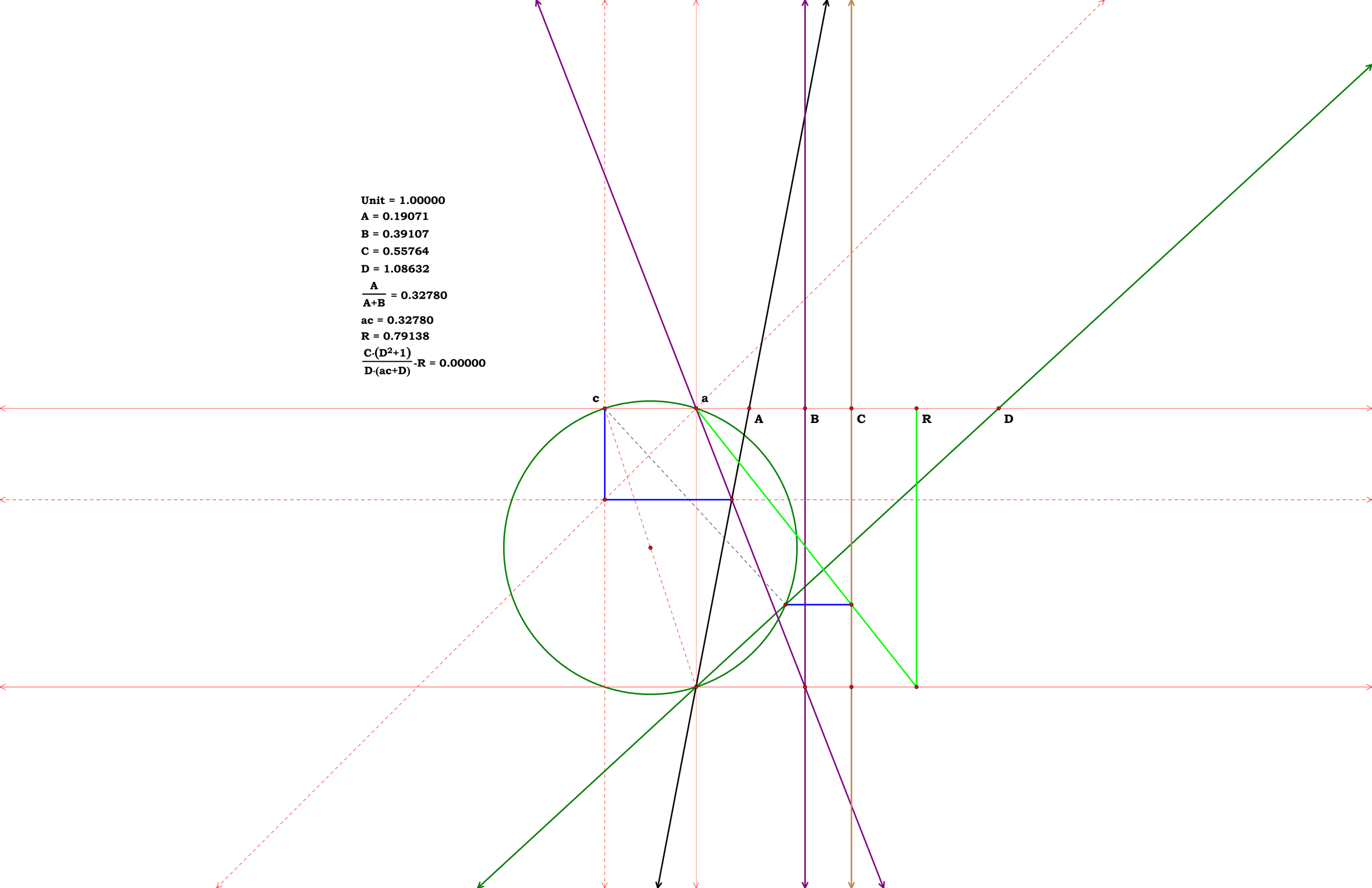
$\frac{B}{A}$ = 0.64390

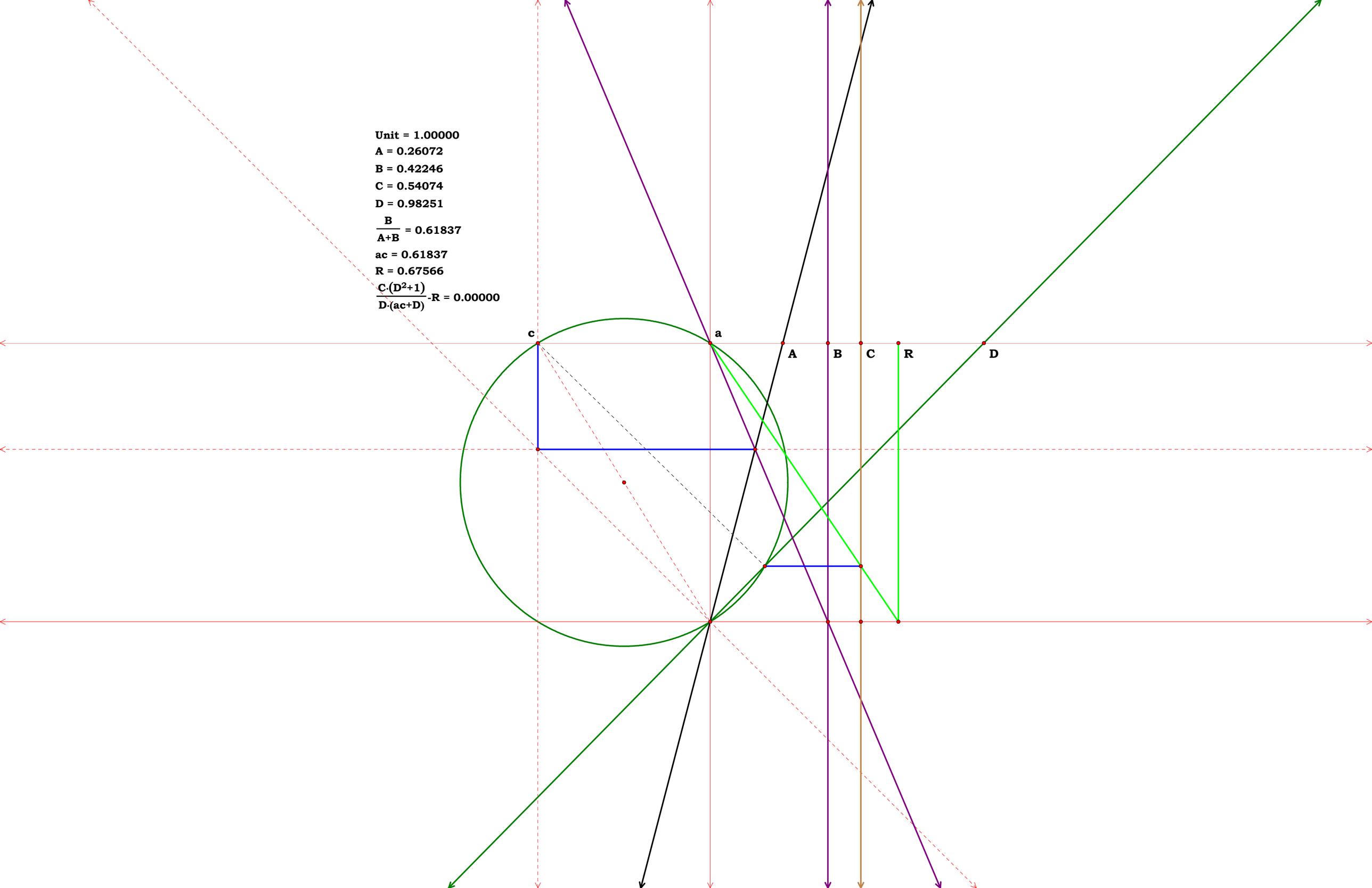
ac = 0.64390

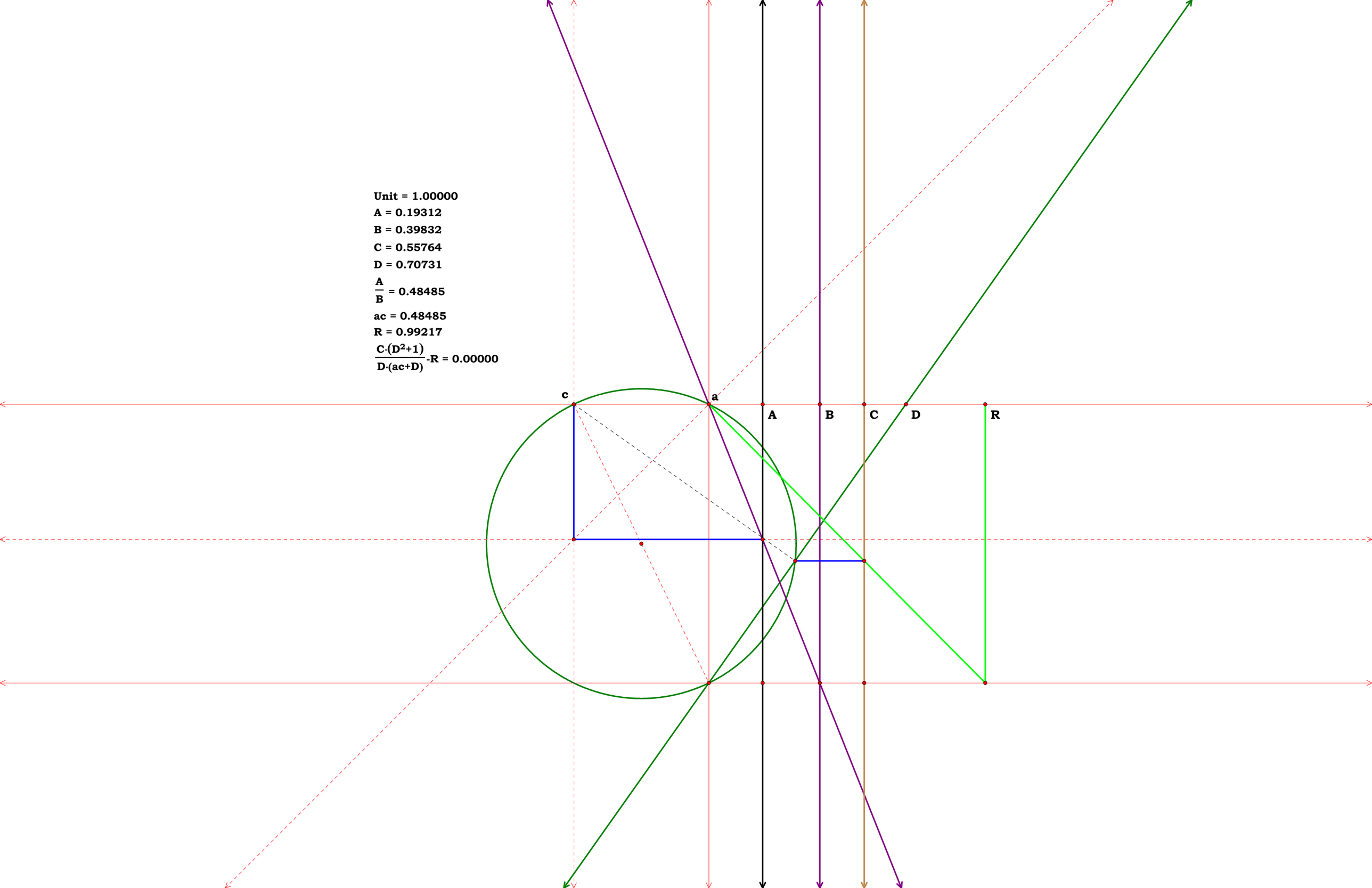
R = 0.75661

$\frac{C\cdot(D^2+1)}{D\cdot(ac+D)}$-R = 0.00000




Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 1.08632
A/(A+B) = 0.32780
ac = 0.32780
R = 0.79138
C·(D²+1)/(D·(ac+D)) - R = 0.00000
c
a
A
B
C
R
D


Unit = 1.00000
A = 0.26072
B = 0.42246
C = 0.54074
D = 0.98251
B / (A+B) = 0.61837
ac = 0.61837
R = 0.67566
C·(D²+1) / (D·(ac+D)) - R = 0.00000
c
a
A
B
C
R
D


Unit = 1.00000
A = 0.19312
B = 0.39832
C = 0.55764
D = 0.70731
A/B = 0.48485
ac = 0.48485
R = 0.99217
C·(D²+1)/(D·(ac+D)) -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.23175

B = 0.40556

C = 0.55764

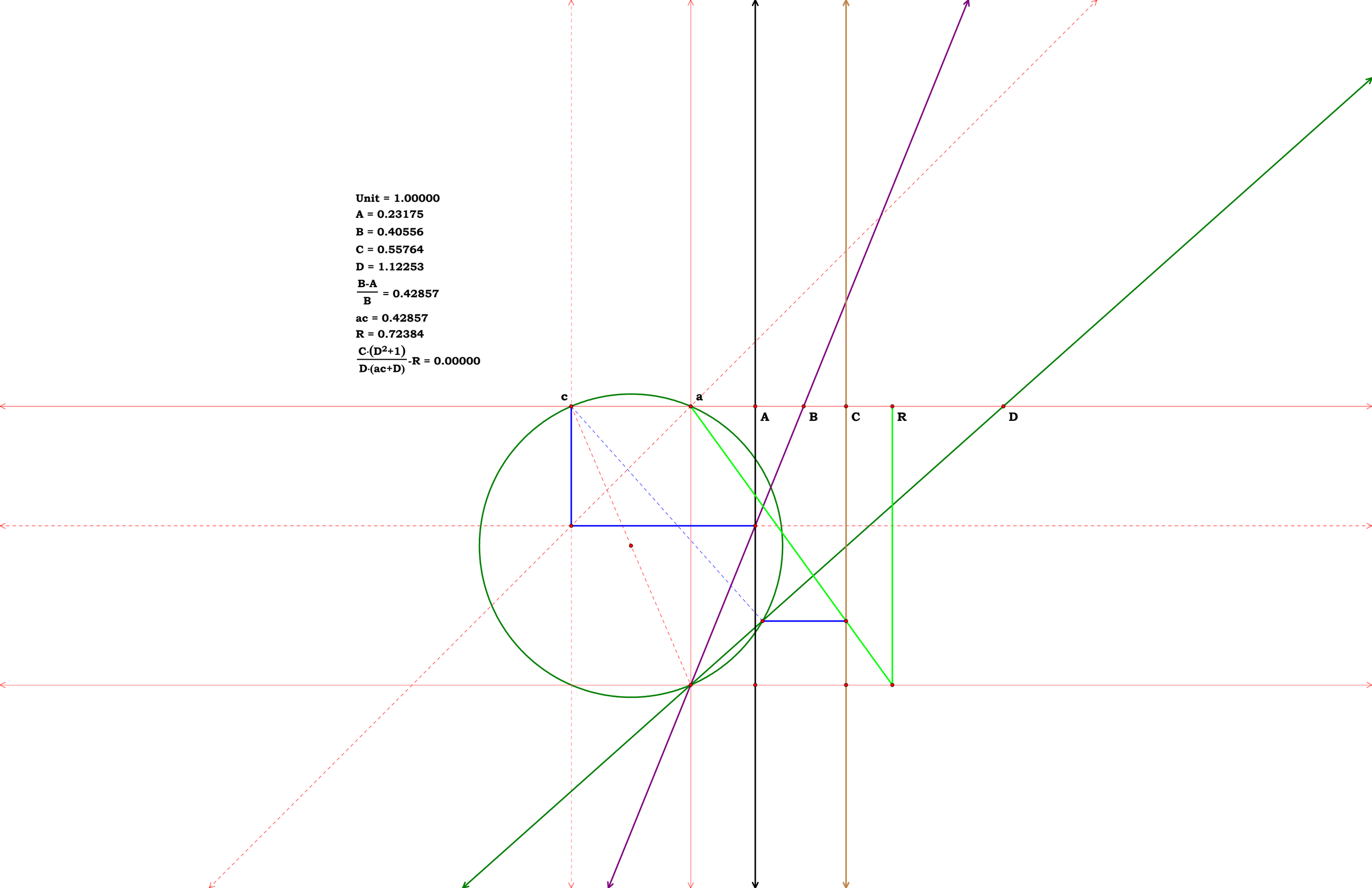
D = 1.12253

$\frac{B-A}{B}$ = 0.42857

ac = 0.42857

R = 0.72384

$\frac{C\cdot(D^2+1)}{D\cdot(ac+D)}$-R = 0.00000



Unit = 1.00000

A = 0.32831

B = 0.18347

C = 0.55764

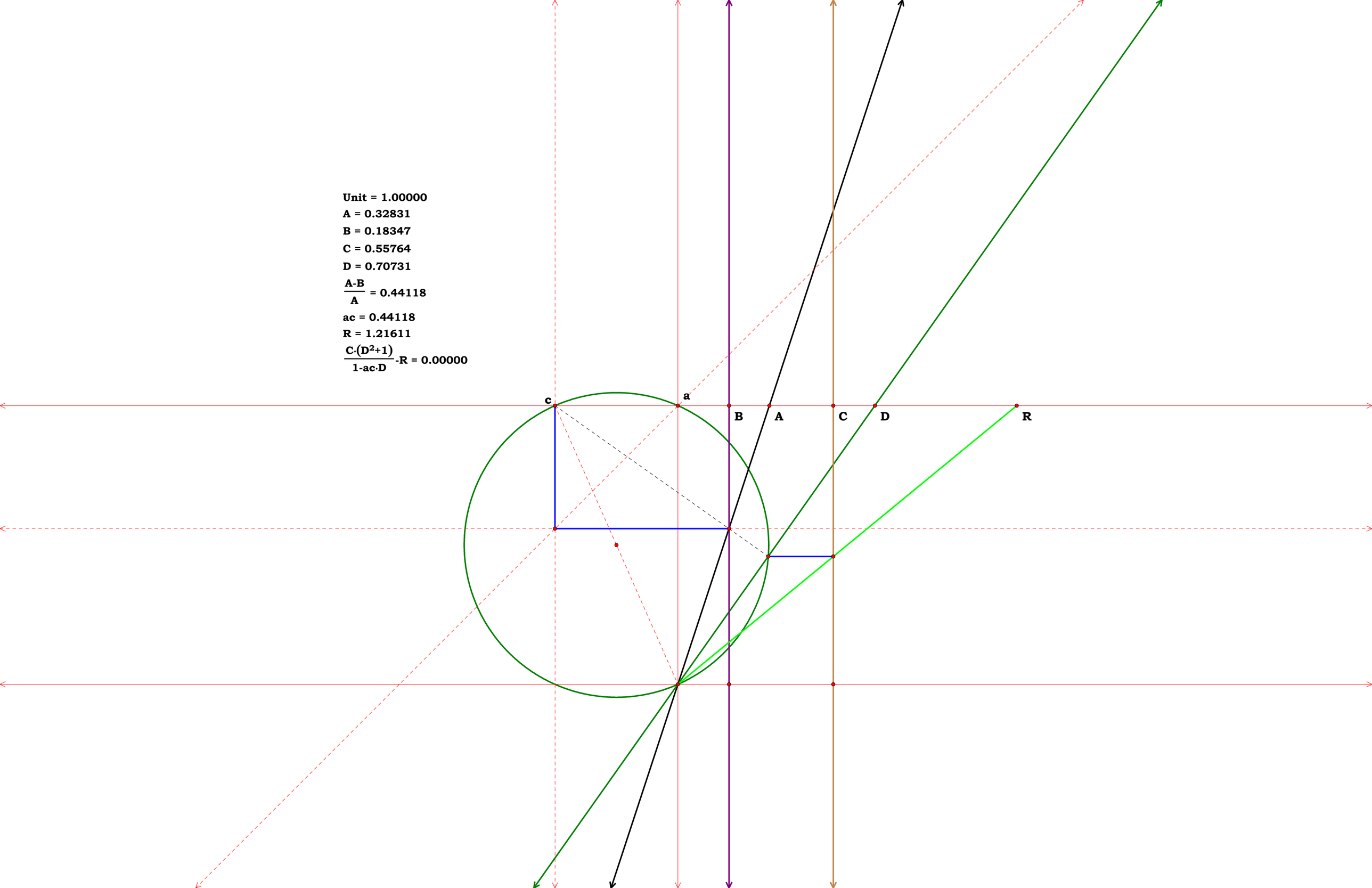
D = 0.70731

$\frac{A-B}{A}$ = 0.44118

ac = 0.44118

R = 1.21611

$\frac{C\cdot(D^2+1)}{1-ac\cdot D}$-R = 0.00000



Unit = 1.00000

A = 0.41763

B = 0.23175

C = 0.78456

D = 0.59868

$\frac{B}{A}$ = 0.55491

ac = 0.55491

R = 1.59597

$\frac{C\cdot(D^2+1)}{1-ac\cdot D}$-R = 0.00000

c

a

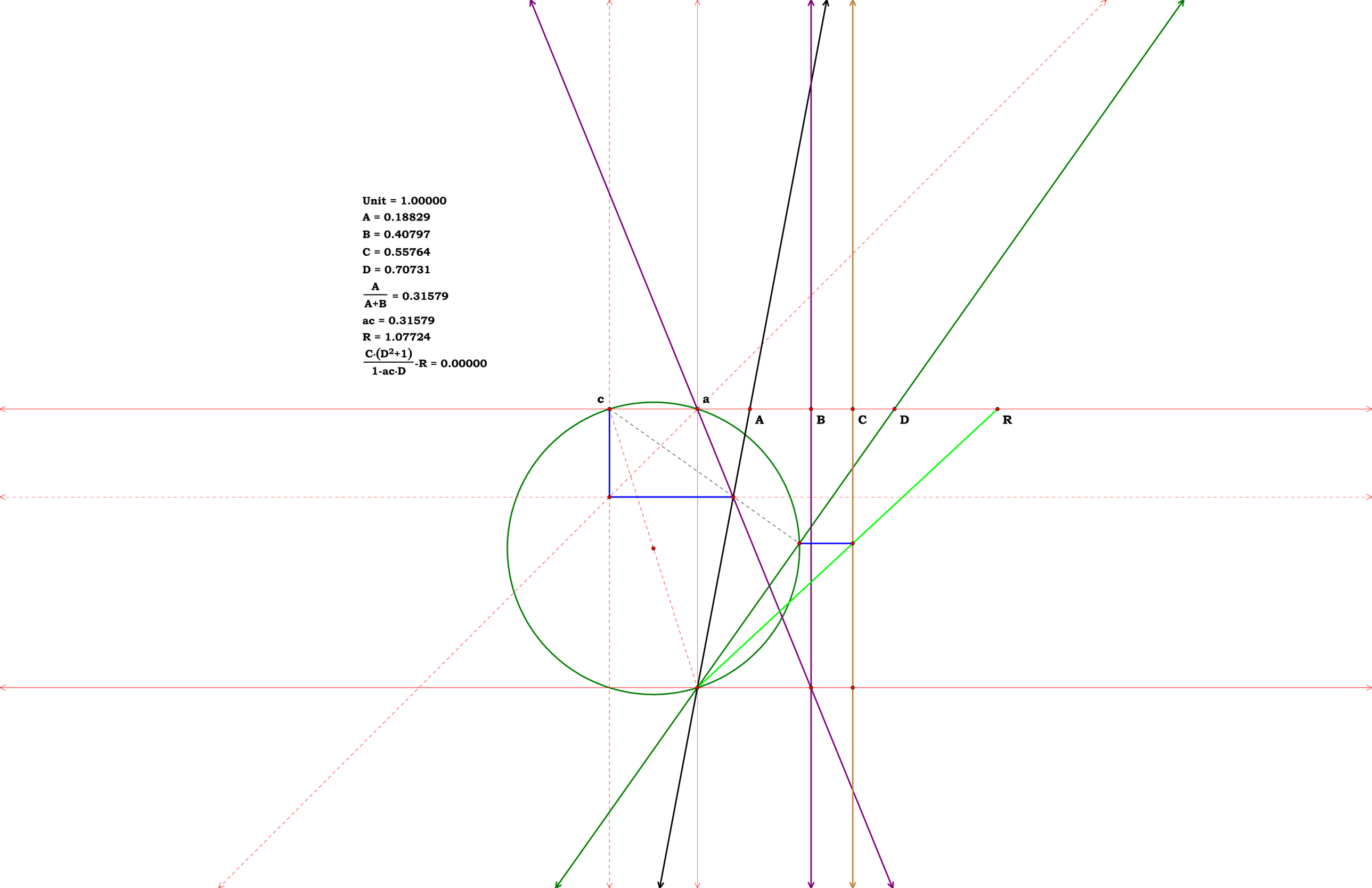
B

A

D

C

R


Unit = 1.00000
A = 0.18829
B = 0.40797
C = 0.55764
D = 0.70731
A/(A+B) = 0.31579
ac = 0.31579
R = 1.07724
C·(D²+1)/(1-ac·D) - R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.26796

B = 0.38625

C = 0.55764

D = 0.70731

$\frac{B}{A+B}$ = 0.59041

ac = 0.59041

R = 1.43652

$\frac{C\cdot(D^2+1)}{1-ac\cdot D}$-R = 0.00000

c

a

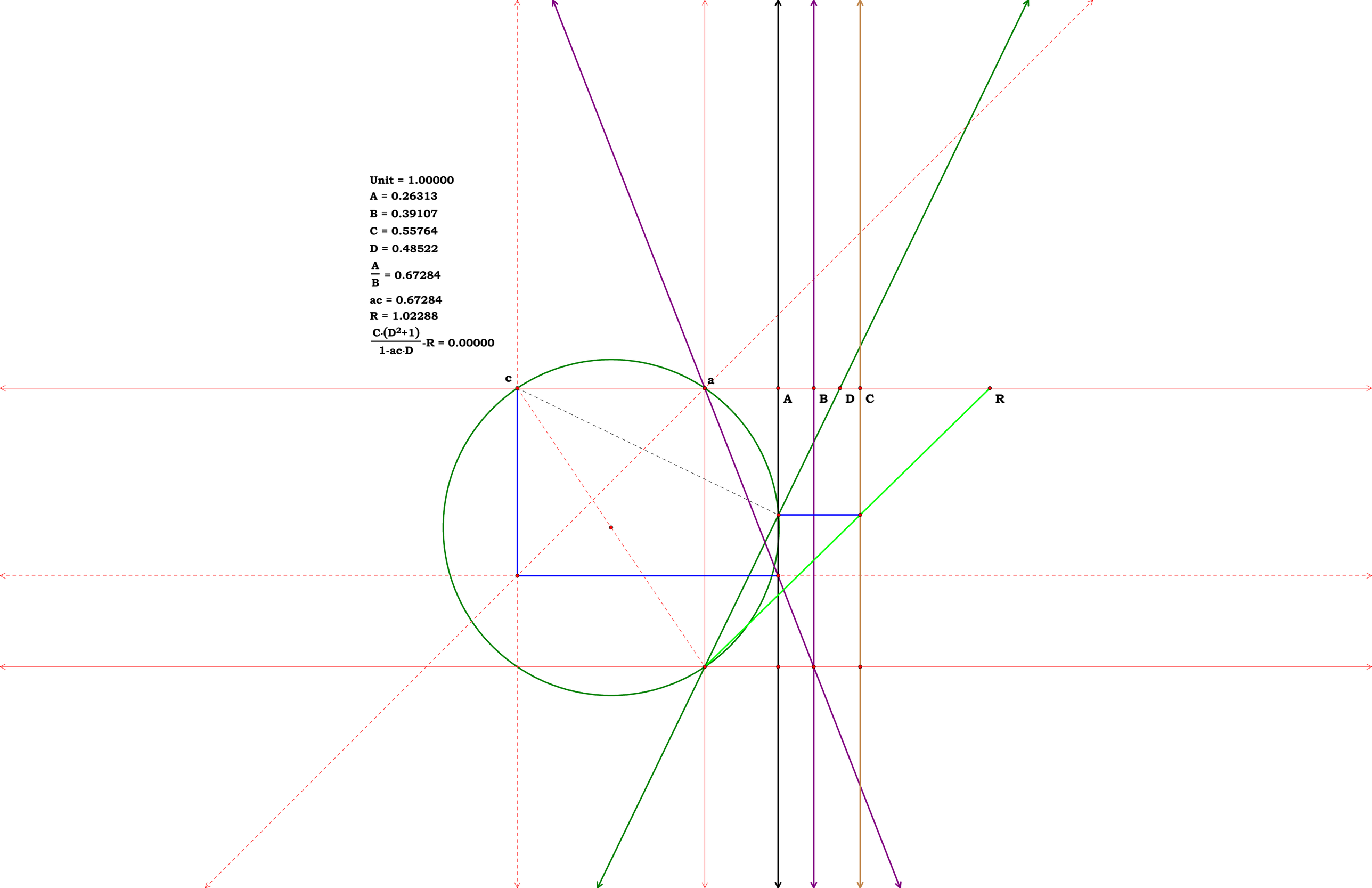
A

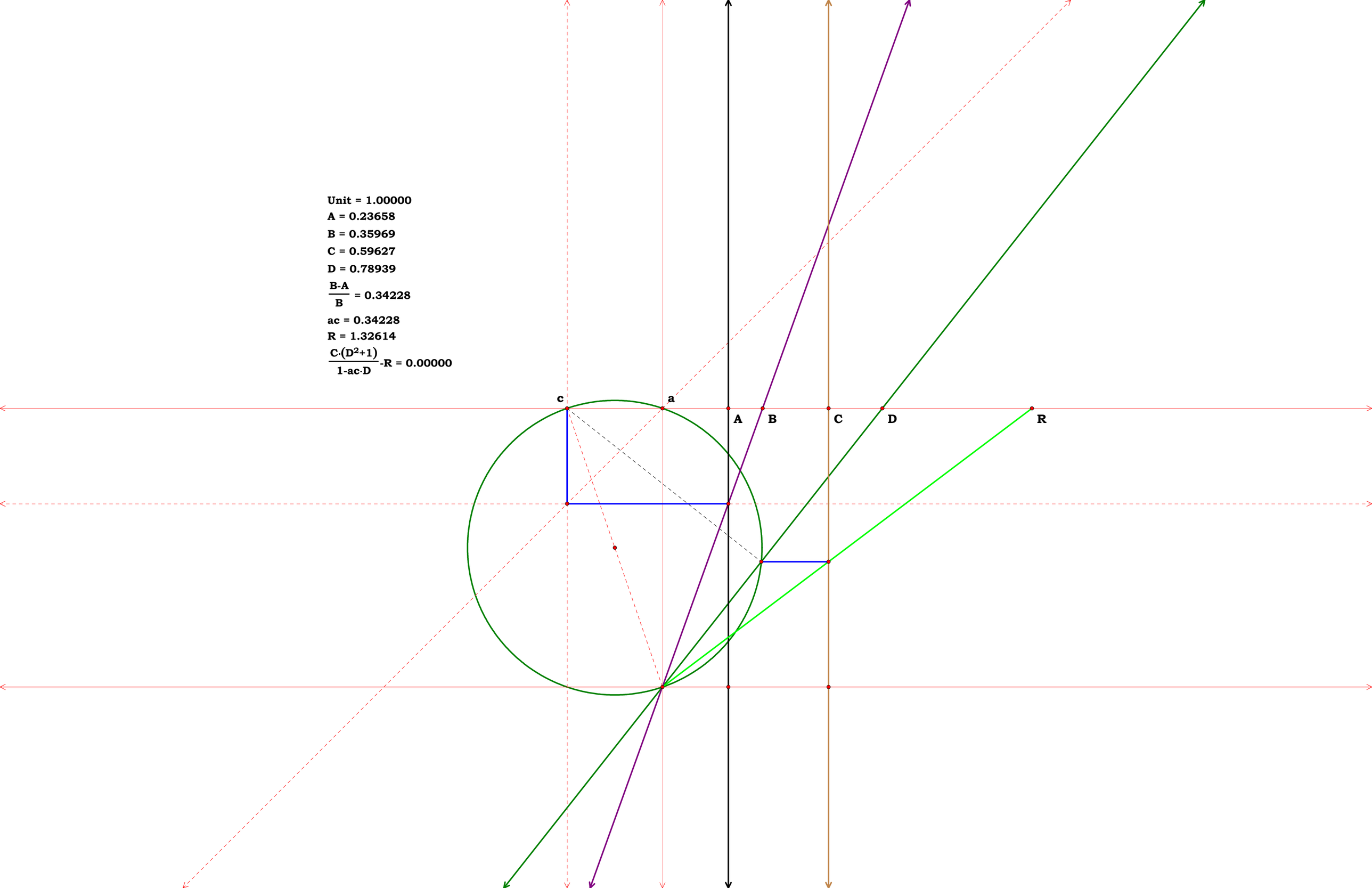
B

C

D

R


Unit = 1.00000
A = 0.26313
B = 0.39107
C = 0.55764
D = 0.48522
A/B = 0.67284
ac = 0.67284
R = 1.02288
C·(D²+1)/(1-ac·D) -R = 0.00000
c
a
A
B
D
C
R


Unit = 1.00000
A = 0.23658
B = 0.35969
C = 0.59627
D = 0.78939
(B-A)/B = 0.34228
ac = 0.34228
R = 1.32614
C·(D²+1)/(1-ac·D) -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.33314

B = 0.17622

C = 0.59144

D = 0.89319

E = 0.52385

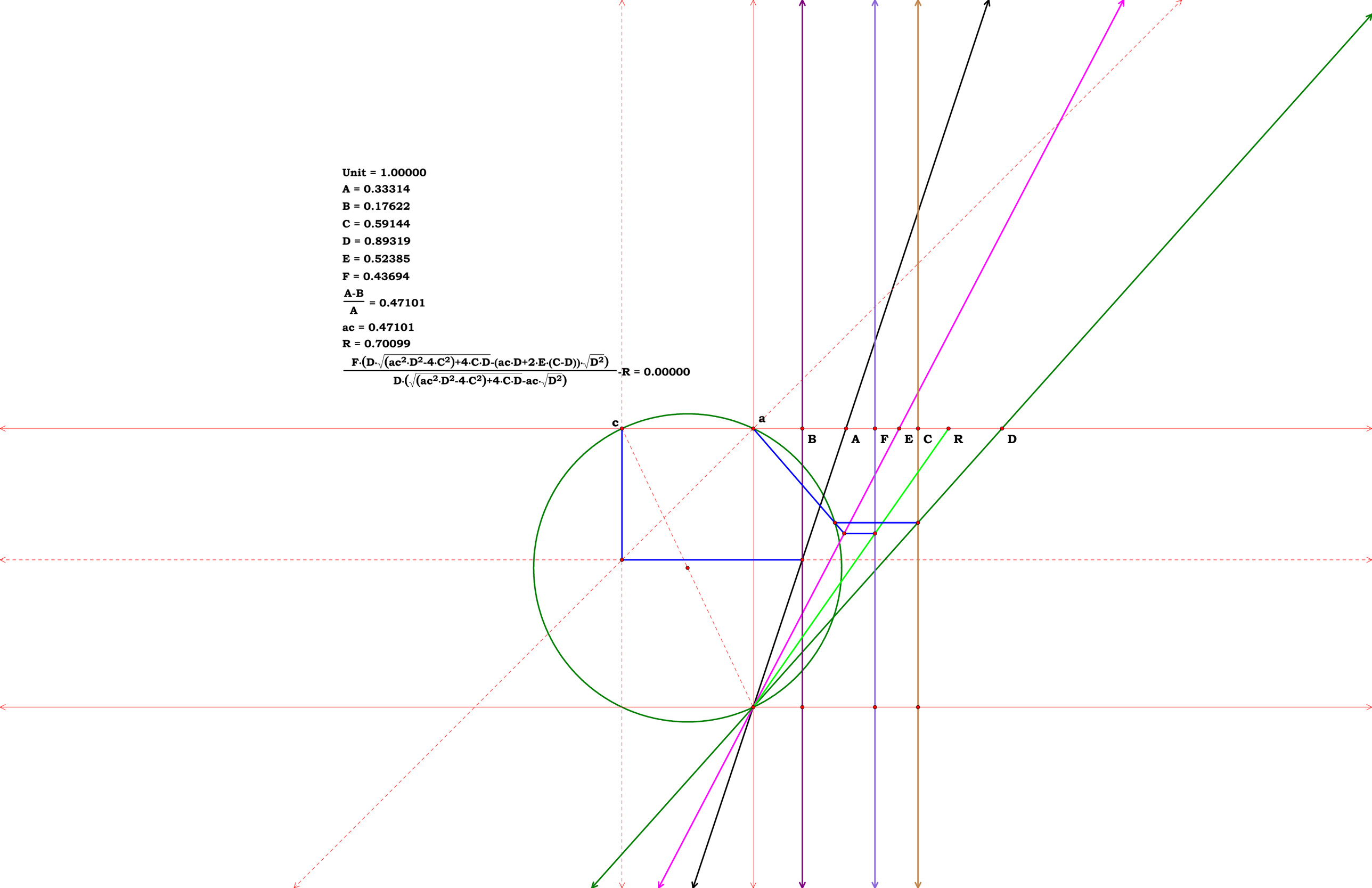
F = 0.43694

$\frac{A-B}{A}$ = 0.47101

ac = 0.47101

R = 0.70099

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}$ - R = 0.00000



Unit = 1.00000

A = 0.42246

B = 0.18588

C = 0.50936

D = 1.13942

E = 0.72180

F = 0.83526

$\frac{B}{A}$ = 0.44000

ac = 0.44000

R = 1.86519

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}$ -R = 0.00000

c a B A C E F D R

Unit = 1.00000

A = 0.21244

B = 0.42246

C = 0.78698

D = 1.23840

E = 0.86181

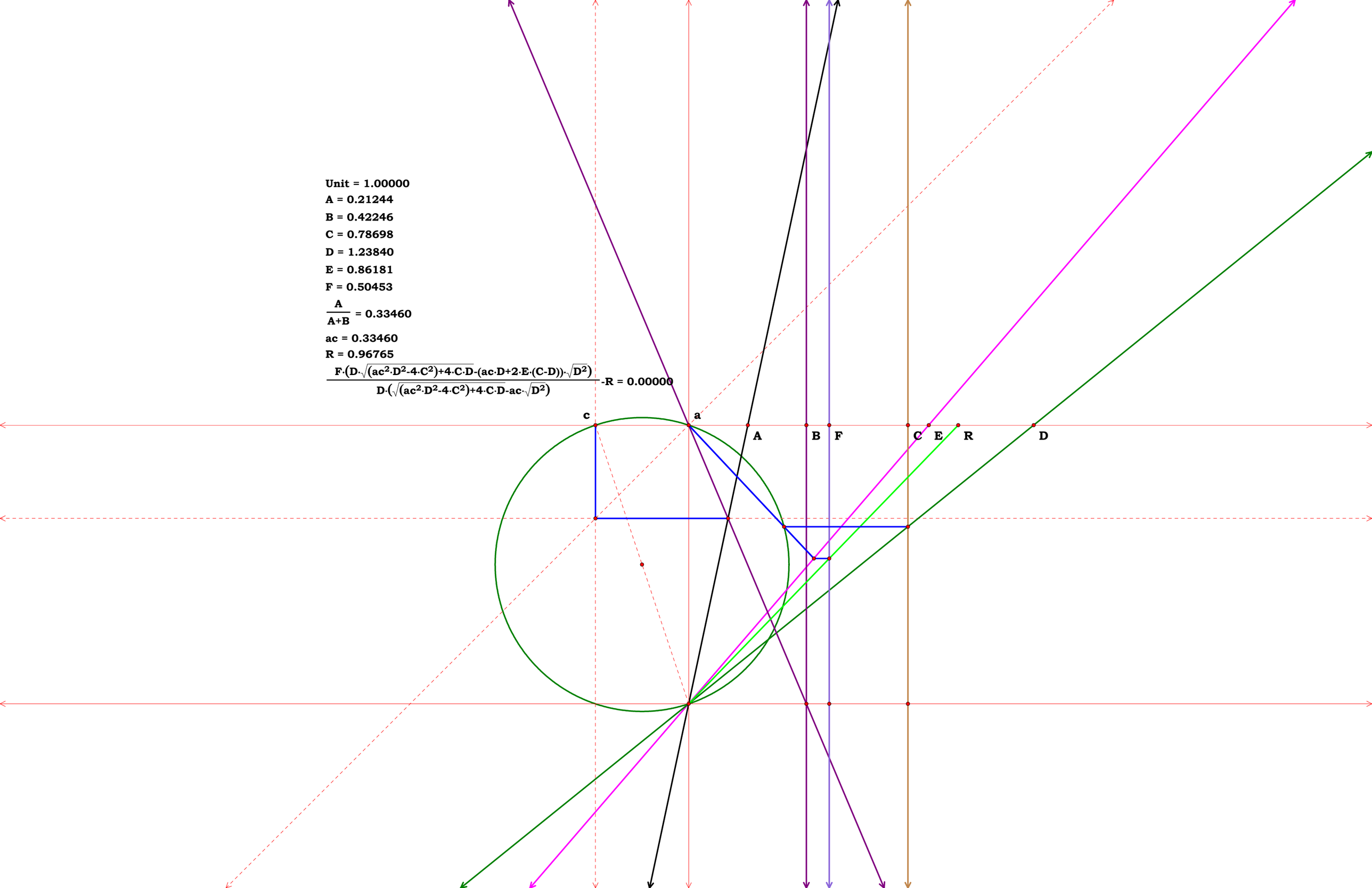
F = 0.50453

$\frac{A}{A+B}$ = 0.33460

ac = 0.33460

R = 0.96765

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}$-R = 0.00000



Unit = 1.00000

A = 0.19795

B = 0.32831

C = -1.13701

D = -1.33738

E = 0.86181

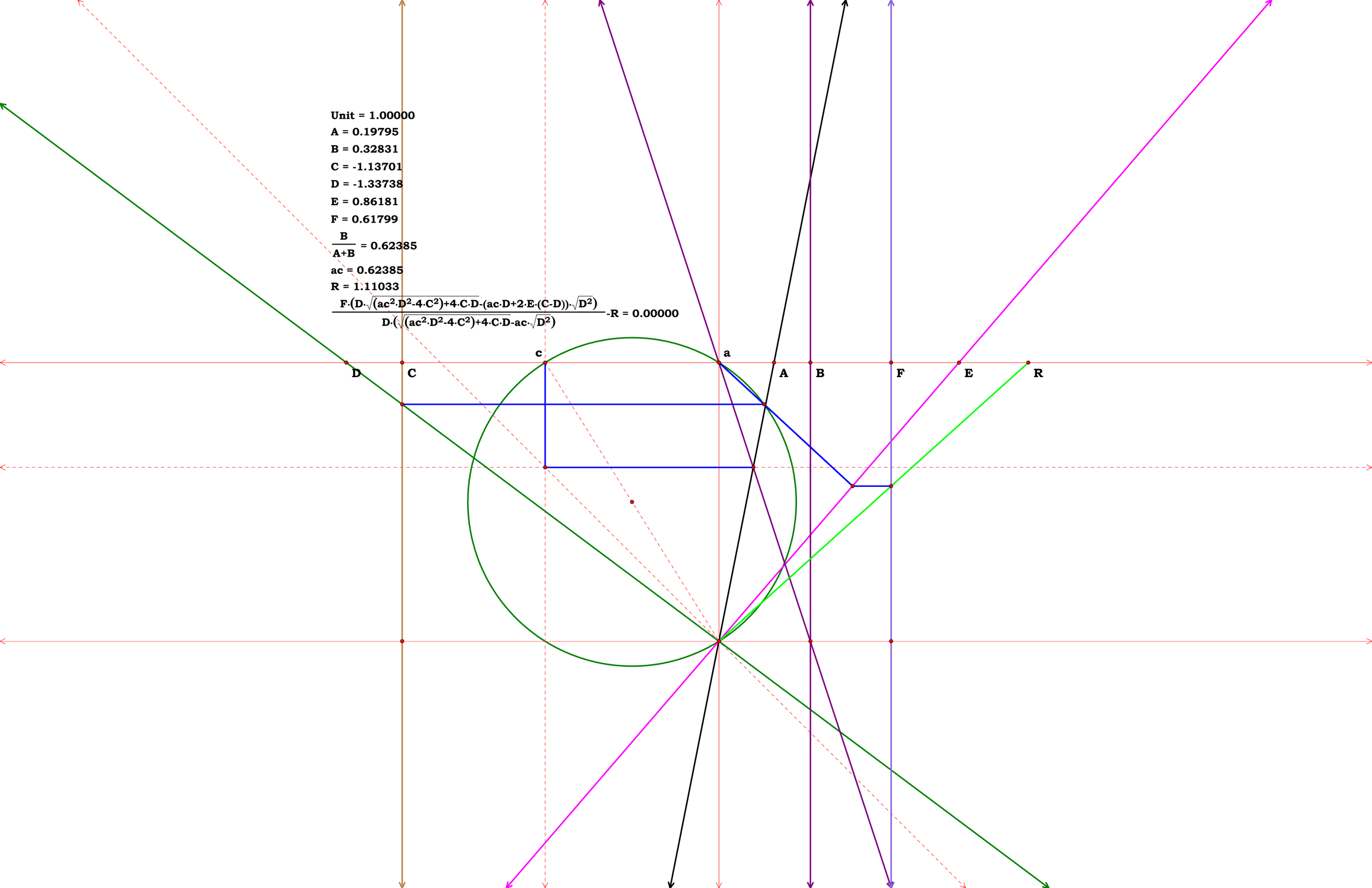
F = 0.61799

$\frac{B}{A+B} = 0.62385$

ac = 0.62385

R = 1.11033

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)}+4\cdot C\cdot D-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)}+4\cdot C\cdot D-ac\cdot\sqrt{D^2}\right)}-R = 0.00000$



Unit = 1.00000

A = 0.19071

B = 0.38142

C = 0.55281

D = 0.74111

E = 0.90768

F = 0.93665

$\frac{A}{B}$ = 0.50000

ac = 0.50000

R = 1.79376

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}$ -R = 0.00000

c

a

A

B

C

D

EF

R

Unit = 1.00000

A = 0.26554

B = 0.39107

C = 0.51660

D = 0.70731

E = 0.88837

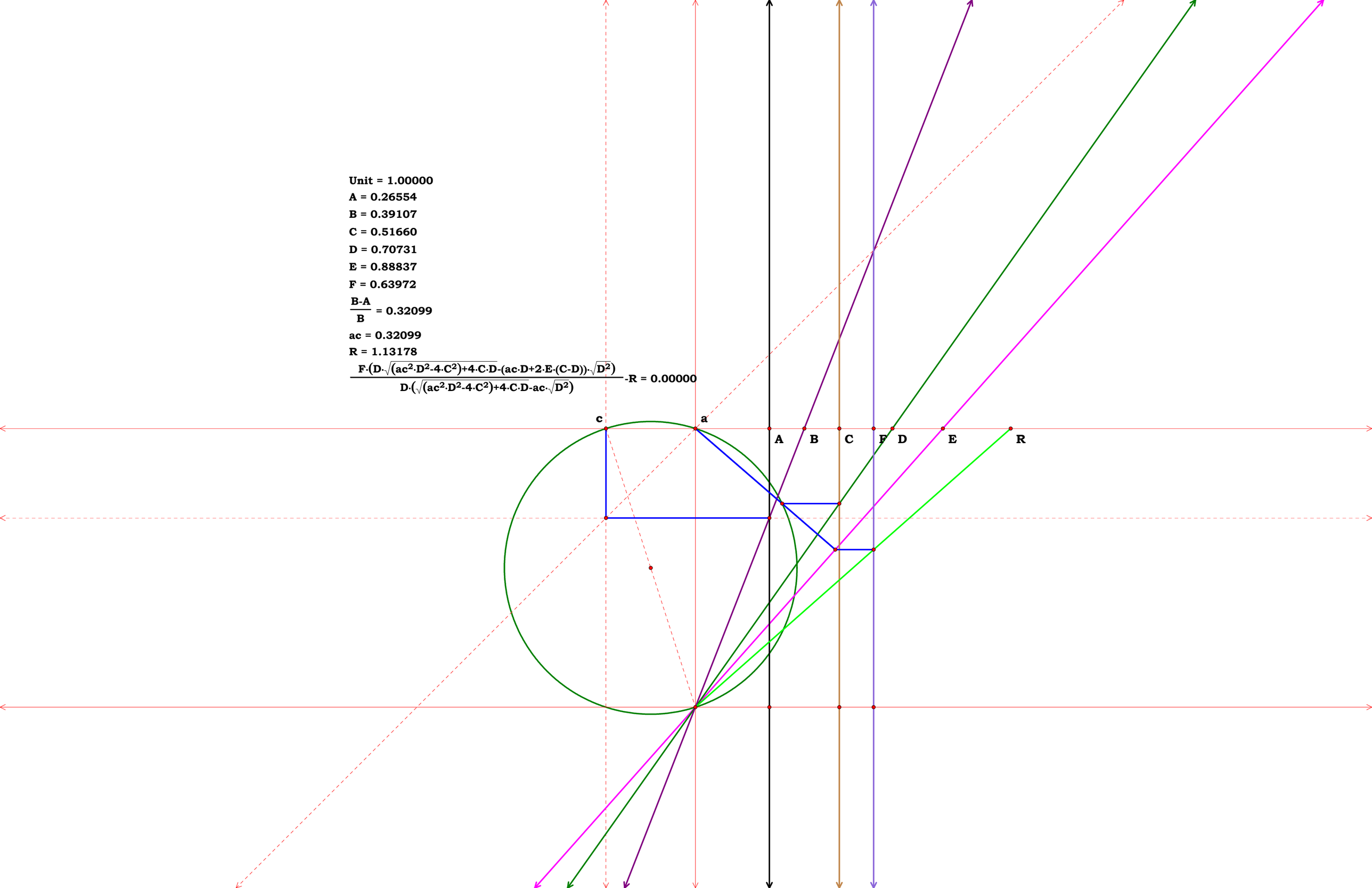
F = 0.63972

$\frac{B-A}{B}$ = 0.32099

ac = 0.32099

R = 1.13178

$\frac{F\cdot\left(D\cdot\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-\left(ac\cdot D+2\cdot E\cdot(C-D)\right)\cdot\sqrt{D^2}\right)}{D\cdot\left(\sqrt{\left(ac^2\cdot D^2-4\cdot C^2\right)+4\cdot C\cdot D}-ac\cdot\sqrt{D^2}\right)}$ -R = 0.00000



Unit = 1.00000

A = 0.32589

B = 0.21968

C = 1.10321

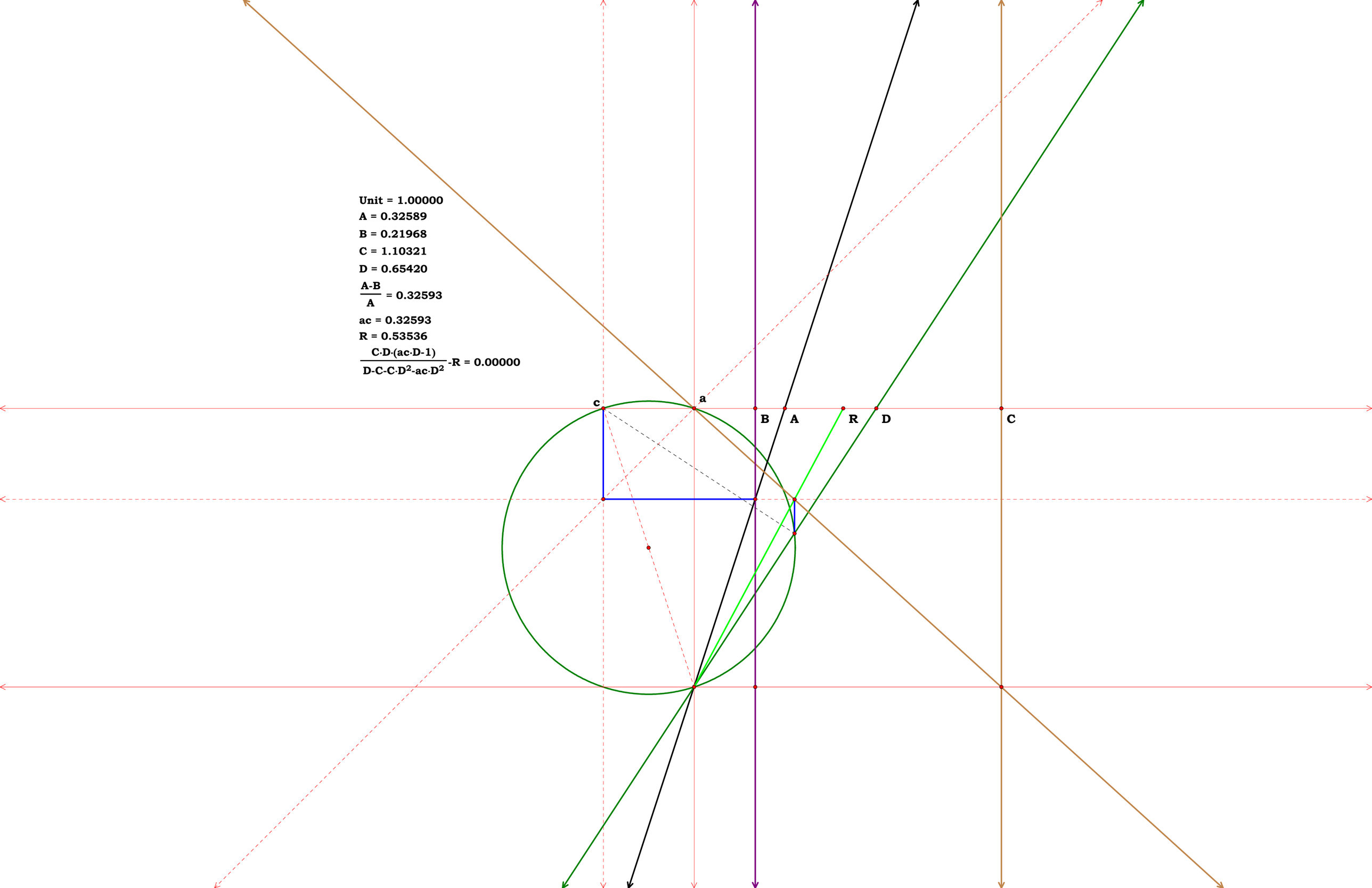
D = 0.65420

$\frac{A-B}{A}$ = 0.32593

ac = 0.32593

R = 0.53536

$\frac{C \cdot D \cdot (ac \cdot D - 1)}{D - C - C \cdot D^2 - ac \cdot D^2} - R$ = 0.00000



Unit = 1.00000

A = 0.53109

B = 0.26796

C = 1.01148

D = 0.72904

$\frac{B}{A}$ = 0.50455

ac = 0.50455

R = 0.42838

$\frac{C \cdot D \cdot (ac \cdot D - 1)}{D - C - C \cdot D^2 - ac \cdot D^2} - R$ = 0.00000

c

a

B

R

A

D

C

Unit = 1.00000

A = 0.15691

B = 0.33072

C = 0.47074

D = 0.56971

$\frac{A}{A+B}$ = 0.32178

ac = 0.32178

R = 1.38398

$\frac{C \cdot D \cdot (ac \cdot D - 1)}{D - C - C \cdot D^2 - ac \cdot D^2} - R$ = 0.00000

c a A B C D R

Unit = 1.00000

A = 0.20278

B = 0.42970

C = 0.84974

D = 0.70731

$\frac{B}{A+B}$ = 0.67939

ac = 0.67939

R = 0.34406

$\frac{C \cdot D \cdot (ac \cdot D - 1)}{D - C - C \cdot D^2 - ac \cdot D^2} - R$ = 0.00000

c

a

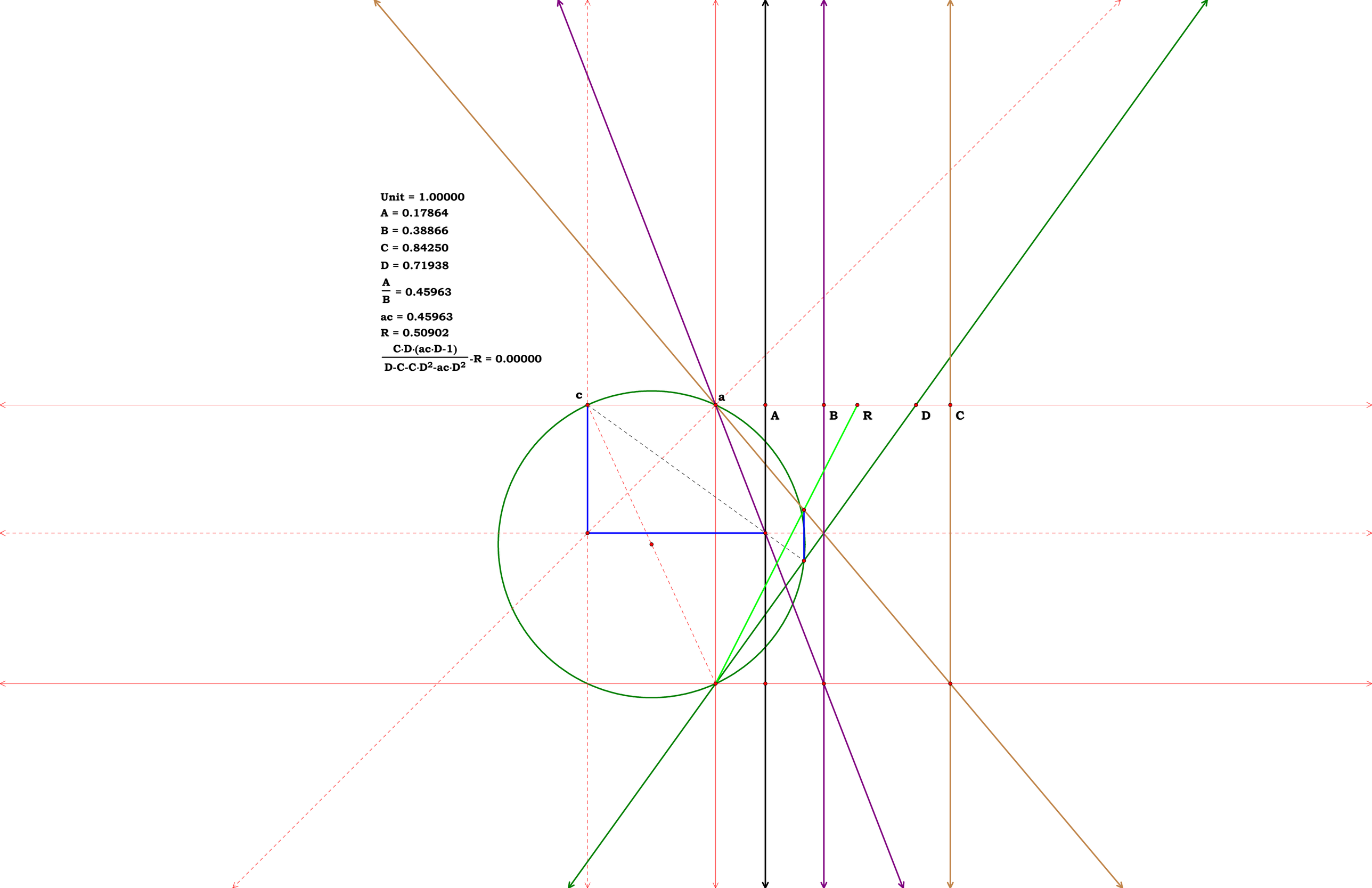
A

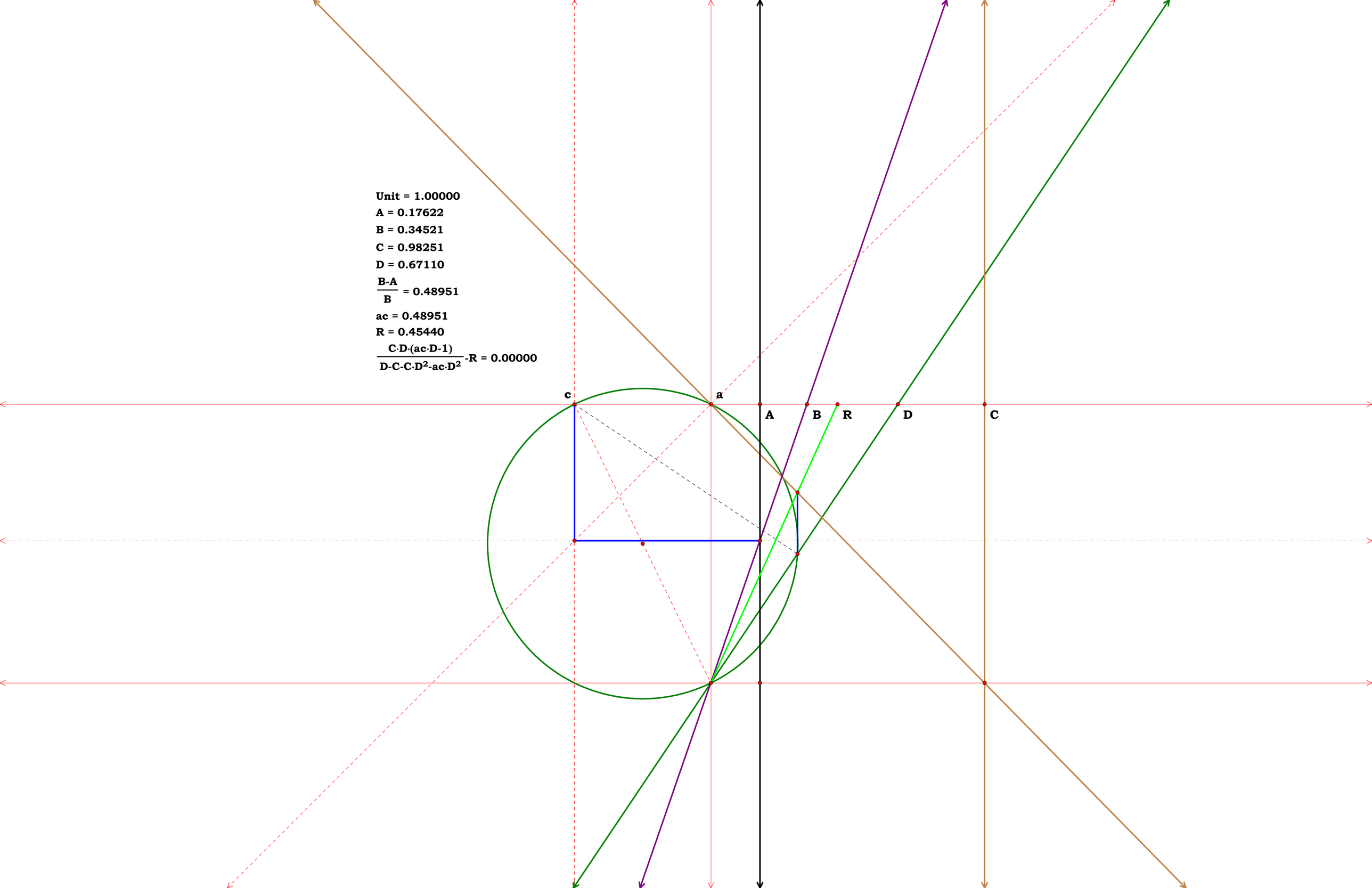
R

B

D

C


Unit = 1.00000
A = 0.17864
B = 0.38866
C = 0.84250
D = 0.71938
A/B = 0.45963
ac = 0.45963
R = 0.50902
C·D·(ac·D-1)/(D-C-C·D²-ac·D²) -R = 0.00000
c
a
A
B
R
D
C


Unit = 1.00000
A = 0.17622
B = 0.34521
C = 0.98251
D = 0.67110
(B-A)/B = 0.48951
ac = 0.48951
R = 0.45440
C·D·(ac·D-1)/(D-C-C·D²-ac·D²) -R = 0.00000
c
a
A
B
R
D
C

Unit = 1.00000

A = 0.28486

B = 0.19071

C = 0.54316

D = 1.36876

$\frac{A-B}{A}$ = 0.33051

ac = 0.33051

R = 0.44007

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}-R$ = 0.00000

c

a

B

A

R

C

D

Unit = 1.00000

A = 0.66145

B = 0.26313

C = 0.55764

D = 1.22874

$\frac{B}{A}$ = 0.39781

ac = 0.39781

R = 0.44394

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}$ -R = 0.00000

c

a

B

R

C

A

D

Unit = 1.00000

A = 0.20761

B = 0.36935

C = 0.72421

D = 1.27702

$\frac{A}{A+B} = 0.35983$

ac = 0.35983

R = 0.52217

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.44901

B = 0.19312

C = 0.81594

D = 1.32772

$\frac{B}{A+B}$ = 0.30075

ac = 0.30075

R = 0.57788

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}$ -R = 0.00000

c

a

B

A

R

C

D

Unit = 1.00000

A = 0.12070

B = 0.40556

C = 0.76525

D = 1.46291

$\frac{A}{B}$ = 0.29762

ac = 0.29762

R = 0.53129

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}$ -R = 0.00000

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.21485

B = 0.36693

C = 0.75077

D = 1.05252

$\frac{B-A}{B}$ = 0.41447

ac = 0.41447

R = 0.56111

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot C^2+2\cdot ac^2\cdot C\cdot D+ac^2\cdot D^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot D\cdot\sqrt{(C+D)^2}}$-R = 0.00000

c

a

A

B

R

C

D

Unit = 1.00000

A = 0.59385

B = 0.36935

C = 0.90285

D = 1.18046

$\frac{A-B}{A} = 0.37805$

ac = 0.37805

R = 0.44111

$$\frac{C\cdot(D^2+1)\cdot\left(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2}\right)}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\cdot(D-C-C\cdot D^2-ac\cdot D^2)} - R = 0.00000$$

c a B R A C D

Unit = 1.00000

A = 0.45625

B = 0.13277

C = 0.80146

D = 1.00424

$\frac{B}{A}$ = 0.29101

ac = 0.29101

R = 0.66602

$$\frac{C\cdot(D^2+1)\cdot\left(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2}\right)}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\cdot(D-C-C\cdot D^2-ac\cdot D^2)}-R = 0.00000$$

c

a

B

A

R

C

D

Unit = 1.00000

A = 0.22933

B = 0.41280

C = 0.70731

D = 1.00182

$\frac{A}{A+B}$ = 0.35714

ac = 0.35714

R = 0.64166

$$\frac{C\cdot(D^2+1)\cdot(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2)}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\cdot(D-C-C\cdot D^2-ac\cdot D^2)}-R = 0.00000$$

c a A B R C D

Unit = 1.00000

A = 0.47557

B = 0.62041

C = 1.32048

D = 0.70731

$\frac{B}{A+B}$ = 0.56608

ac = 0.56608

R = 0.27397

$$\frac{C\cdot(D^2+1)\cdot\left(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2}\right)}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\cdot(D-C-C\cdot D^2-ac\cdot D^2)}-R = 0.00000$$

c

a

R

A

B

D

C

Unit = 1.00000

A = 0.19554

B = 0.45867

C = 1.33255

D = 0.83526

$\frac{A}{B}$ = 0.42632

ac = 0.42632

R = 0.34494

$$\frac{C\cdot(D^2+1)\cdot\left(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2)}}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\,(D-C-C\cdot D^2-ac\cdot D^2)}-R = 0.00000$$

c

a

R

A

B

D

C

Unit = 1.00000

A = 0.21968

B = 0.33555

C = 1.07907

D = 0.81594

$\frac{B-A}{B}$ = 0.34532

ac = 0.34532

R = 0.48502

$$\frac{C\cdot(D^2+1)\cdot\left(ac\cdot\sqrt{(C\cdot(D^2+1))^2}-\sqrt{(((ac\cdot C\cdot D^2\cdot(((2\cdot ac\cdot C-4\cdot D^2)+ac\cdot C\cdot D^2)-4)+ac^2\cdot C^2)-4\cdot ac\cdot D^3\cdot(ac\cdot D-2))+4\cdot C\cdot D\cdot(D^2+1))-4\cdot D^2)}\right)}{2\cdot\sqrt{(C\cdot(D^2+1))^2}\cdot(D-C-C\cdot D^2-ac\cdot D^2)}-R = 0.00000$$

c a A B R D C

Unit = 1.00000
A = 0.25347
B = 0.12070
C = 0.71938
D = 1.08873
E = 0.86181

ac = 0.52381
R = 0.65338

Equation unfinished

$\frac{A-B}{A} = 0.52381$

$\frac{C}{C+D} = 0.39786$

$\sqrt{1+AC^2} = 1.12888$

$JN-\left(BP+\frac{JN-1}{2}\right) = 0.66658$

$\sqrt{JM\cdot(JN-JM)} = 0.55512$

$GM-\frac{AC}{2} = 0.29322$

$\frac{PG}{BP} = 0.73698$

AC = 0.52381

BP = 0.39786

JN = 1.12888

JM = 0.66658

GM = 0.55512

PG = 0.29322

AQ = 0.73698

$\frac{AQ}{AQ+E} = 0.46096$

AO = 0.46096

$\frac{(2\cdot AO+JN)-1}{2} = 0.52540$

JK = 0.52540

$\sqrt{JK\cdot(JN-JK)} = 0.56309$

EK = 0.56309

$\frac{2\cdot EK-AC}{2} = 0.30119$

EO = 0.30119

$\frac{EO}{AO} = 0.65338$

$\frac{EO}{AO}-R = 0.00000$

c a B A R C E D

Unit = 1.00000

A = 0.42246

B = 0.20519

C = 0.57213

D = 1.29634

E = 1.09114

$\frac{B}{A}$ = 0.48571

ac = 0.48571

R = 0.68486

Equation unfinished

c

a

B

A

C

R

E

D

Unit = 1.00000

A = 0.31141

B = 0.45142

C = 0.55764

D = 1.42911

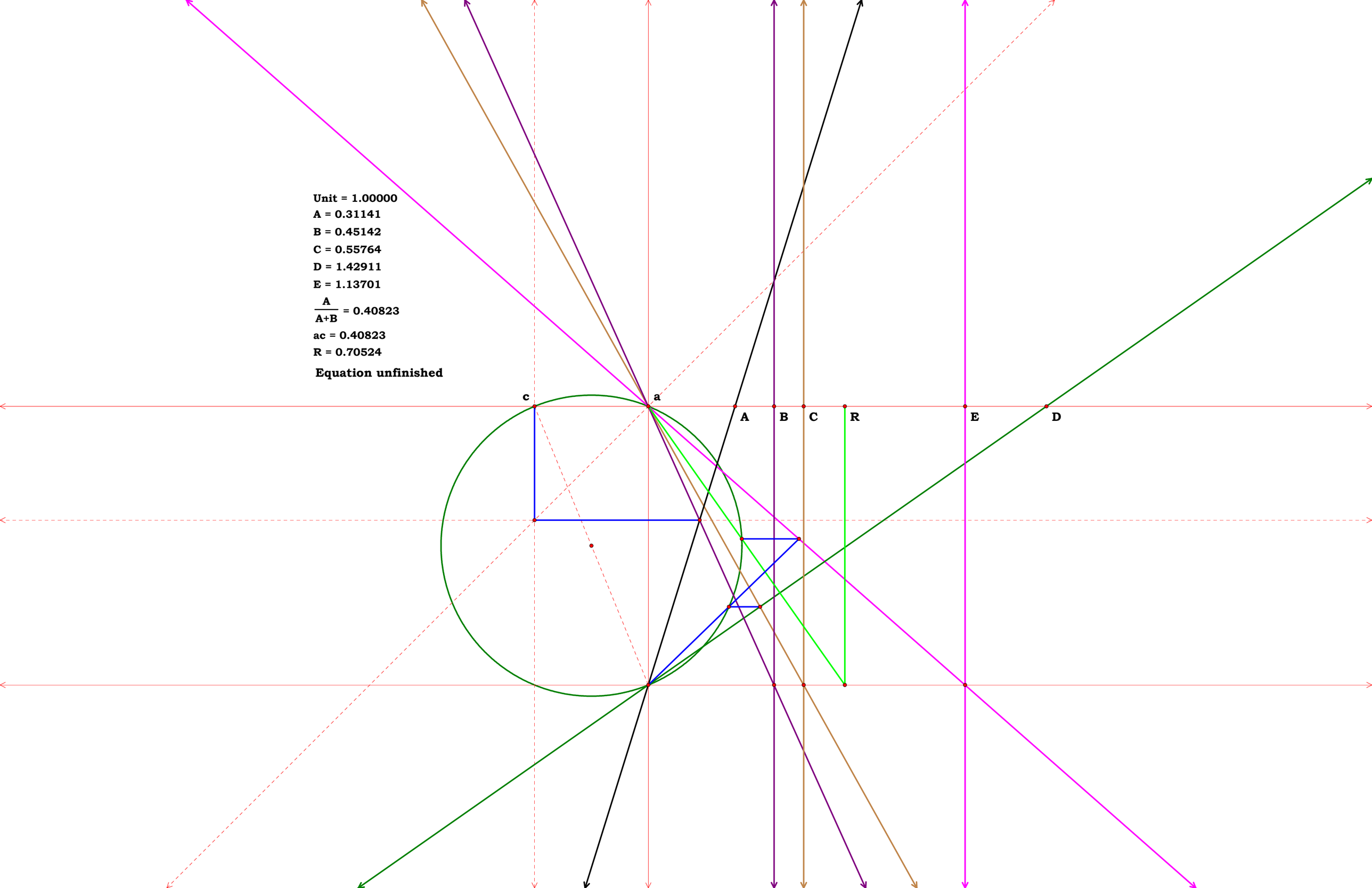
E = 1.13701

$\frac{A}{A+B}$ = 0.40823

ac = 0.40823

R = 0.70524

Equation unfinished



Unit = 1.00000
A = 0.22451
B = 0.46349
C = 0.66145
D = 1.21909
E = 0.86181
$\frac{B}{A+B}$ = 0.67368
ac = 0.67368
R = 0.58713
Equation unfinished

c
a
A
B
R
C
E
D

Unit = 1.00000

A = 0.19071

B = 0.40797

C = 0.71214

D = 1.28668

E = 0.59868

$\frac{A}{B}$ = 0.46746

ac = 0.46746

R = 0.53412

Equation unfinished

c

a

A

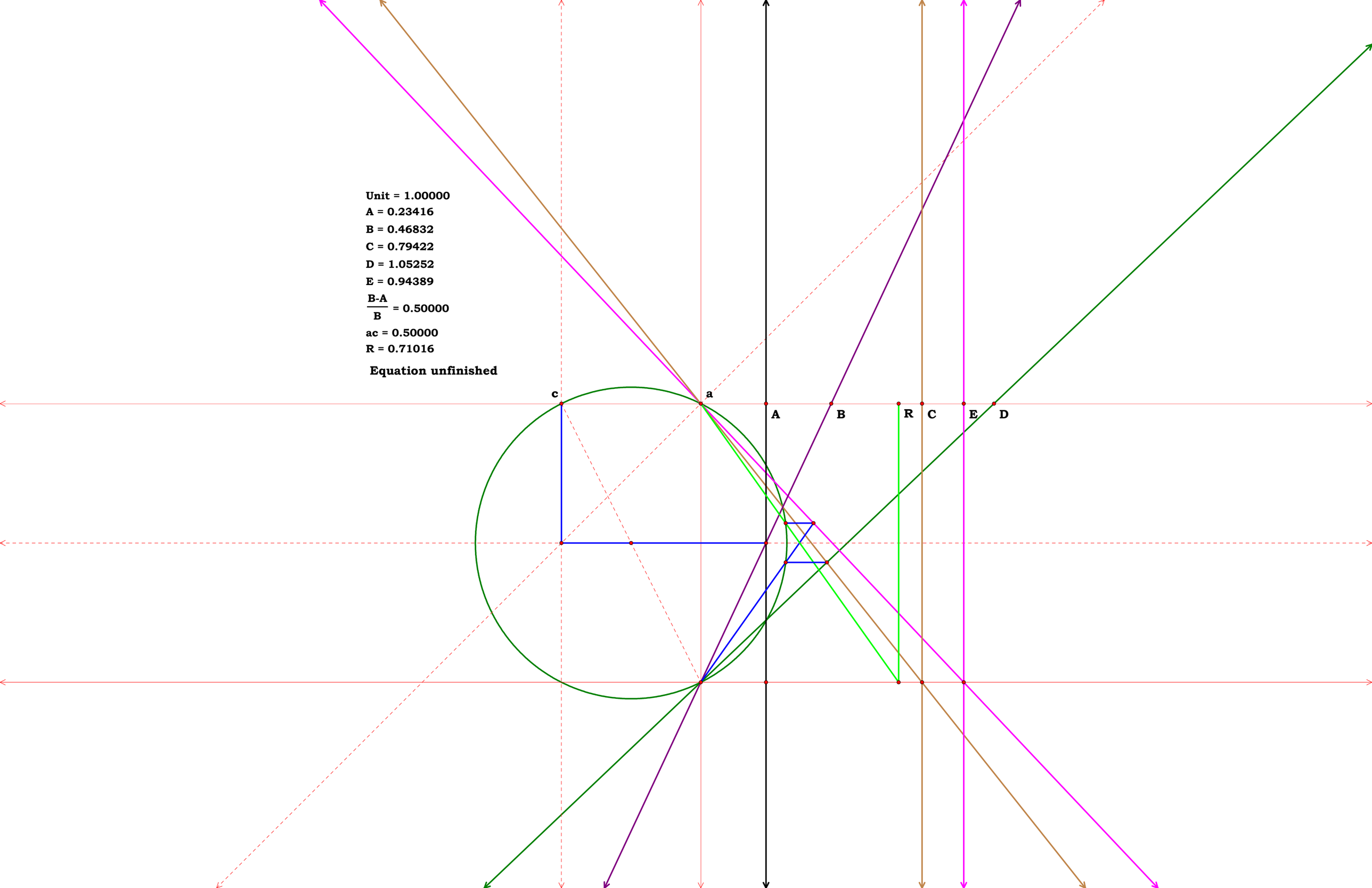
B

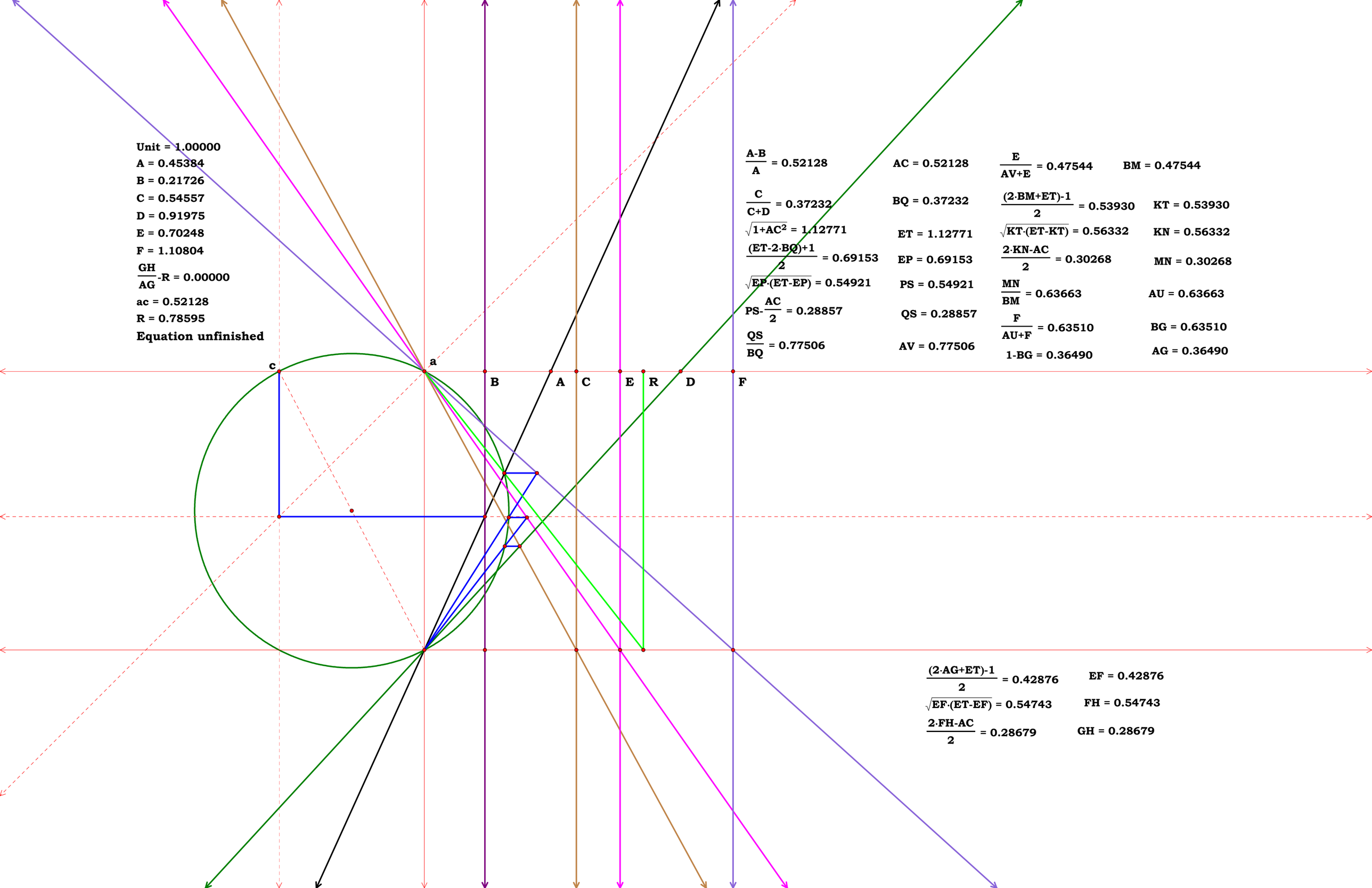
R

E

C

D


Unit = 1.00000
A = 0.23416
B = 0.46832
C = 0.79422
D = 1.05252
E = 0.94389
B-A / B = 0.50000
ac = 0.50000
R = 0.71016
Equation unfinished
c
a
A
B
R
C
E
D


Unit = 1.00000
A = 0.45384
B = 0.21726
C = 0.54557
D = 0.91975
E = 0.70248
F = 1.10804
GH/AG -R = 0.00000
ac = 0.52128
R = 0.78595
Equation unfinished
(A-B)/A = 0.52128
AC = 0.52128
E/(AV+E) = 0.47544
BM = 0.47544
C/(C+D) = 0.37232
BQ = 0.37232
((2·BM+ET)-1)/2 = 0.53930
KT = 0.53930
√(1+AC²) = 1.12771
ET = 1.12771
√(KT·(ET-KT)) = 0.56332
KN = 0.56332
((ET-2·BQ)+1)/2 = 0.69153
EP = 0.69153
(2·KN-AC)/2 = 0.30268
MN = 0.30268
√(EP·(ET-EP)) = 0.54921
PS = 0.54921
MN/BM = 0.63663
AU = 0.63663
PS-AC/2 = 0.28857
QS = 0.28857
F/(AU+F) = 0.63510
BG = 0.63510
QS/BQ = 0.77506
AV = 0.77506
1-BG = 0.36490
AG = 0.36490
((2·AG+ET)-1)/2 = 0.42876
EF = 0.42876
√(EF·(ET-EF)) = 0.54743
FH = 0.54743
(2·FH-AC)/2 = 0.28679
GH = 0.28679
c
a
B
A
C
E
R
D
F

Unit = 1.00000

A = 0.29693

B = 0.21244

C = 0.49246

D = 0.89561

E = 0.61317

F = 1.08149

$\frac{B}{A}$ = 0.71545

ac = 0.71545

x_R = 0.70289

Equation unfinished

c

a

B

A

C

E

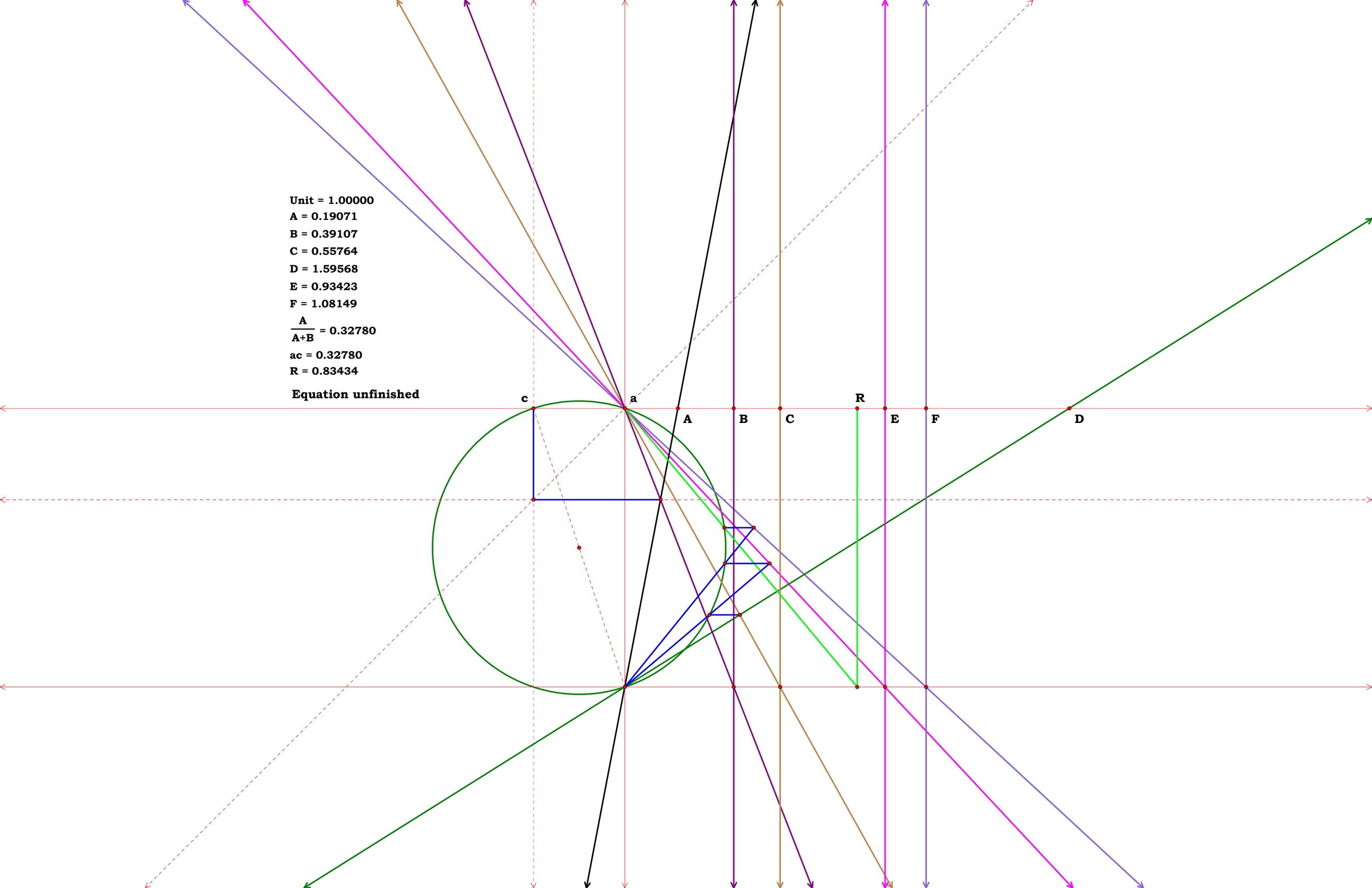
R

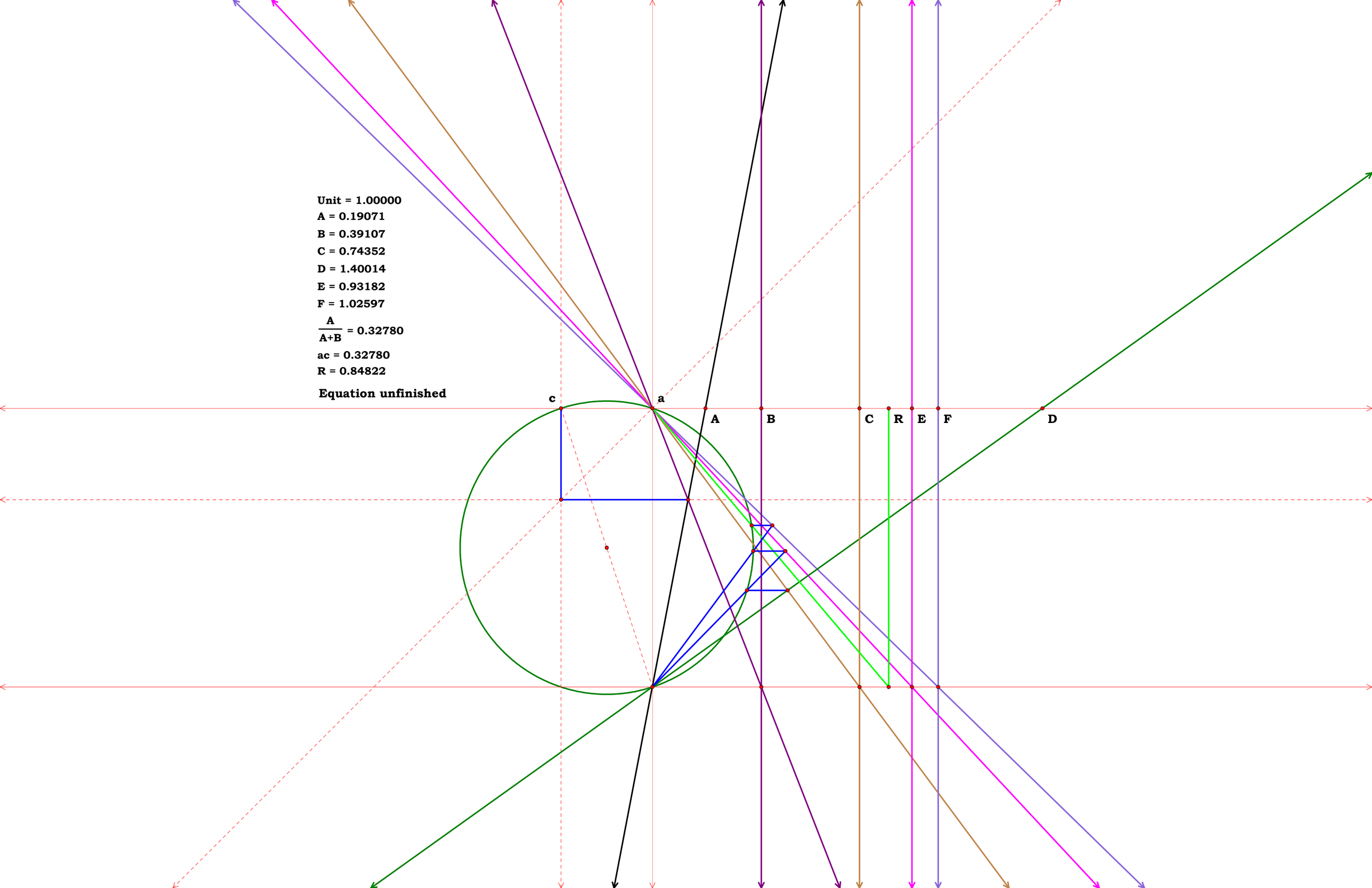
D

F

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 1.59568
E = 0.93423
F = 1.08149
$\frac{A}{A+B}$ = 0.32780
ac = 0.32780
R = 0.83434

Equation unfinished




Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.74352
D = 1.40014
E = 0.93182
F = 1.02597
A/(A+B) = 0.32780
ac = 0.32780
R = 0.84822
Equation unfinished
c
a
A
B
C
R
E
F
D

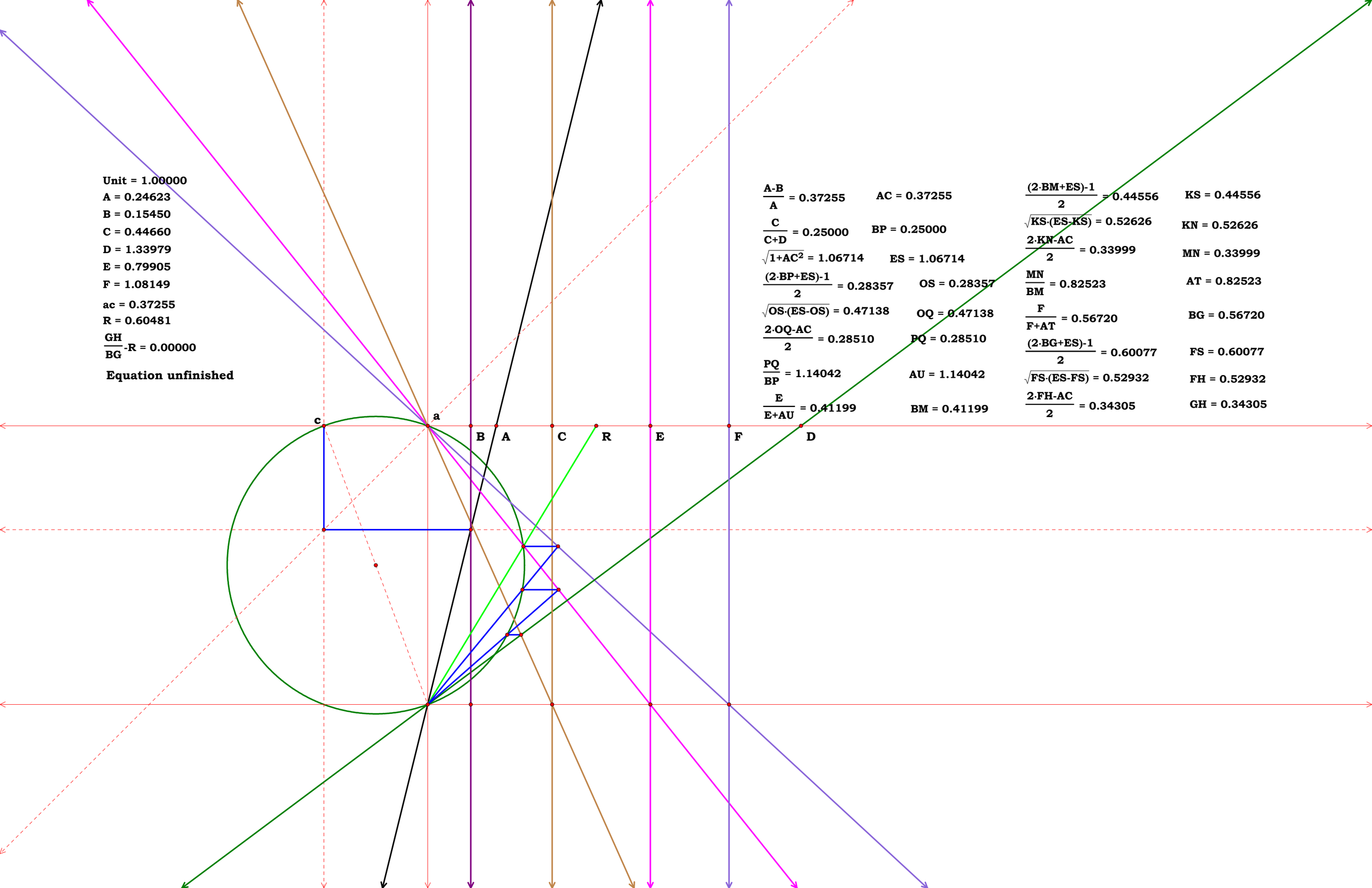
Unit = 1.00000
A = 0.23899
B = 0.51178
C = 0.55764
D = 0.98975
E = 0.76766
F = 1.20702
$\frac{A}{B}$ = 0.46698
ac = 0.46698
R = 0.84274

Equation unfinished

c a A B C E R D F

Unit = 1.00000
A = 0.13519
B = 0.44660
C = 0.55764
D = 0.96803
E = 0.86181
F = 1.08149
$\frac{B-A}{B}$ = 0.69730
ac = 0.69730
R = 0.75999
Equation unfinished

c a A B C R E D F


Unit = 1.00000
A = 0.24623
B = 0.15450
C = 0.44660
D = 1.33979
E = 0.79905
F = 1.08149
ac = 0.37255
R = 0.60481
GH/BG-R = 0.00000
Equation unfinished
c
a
B
A
C
R
E
F
D
(A-B)/A = 0.37255
AC = 0.37255
C/(C+D) = 0.25000
BP = 0.25000
√(1+AC²) = 1.06714
ES = 1.06714
((2·BP+ES)-1)/2 = 0.28357
OS = 0.28357
√(OS·(ES-OS)) = 0.47138
OQ = 0.47138
(2·OQ-AC)/2 = 0.28510
PQ = 0.28510
PQ/BP = 1.14042
AU = 1.14042
E/(E+AU) = 0.41199
BM = 0.41199
((2·BM+ES)-1)/2 = 0.44556
KS = 0.44556
√(KS·(ES-KS)) = 0.52626
KN = 0.52626
(2·KN-AC)/2 = 0.33999
MN = 0.33999
MN/BM = 0.82523
AT = 0.82523
F/(F+AT) = 0.56720
BG = 0.56720
((2·BG+ES)-1)/2 = 0.60077
FS = 0.60077
√(FS·(ES-FS)) = 0.52932
FH = 0.52932
(2·FH-AC)/2 = 0.34305
GH = 0.34305

Unit = 1.00000
A = 0.30900
B = 0.18829
C = 0.47315
D = 1.52808
E = 0.86181
F = 1.08149
$\frac{B}{A}$ = 0.60938
ac = 0.60938
R = 0.40145

Equation unfinished

c
a
B
A
R
C
E
F
D

Unit = 1.00000
A = 0.18105
B = 0.41763
C = 0.55764
D = 1.42911
E = 0.75559
F = 1.08149
$\frac{A}{A+B}$ = 0.30242
ac = 0.30242
R = 0.68021
Equation unfinished

c a A B C R E F D

Unit = 1.00000
A = 0.22451
B = 0.43935
C = 0.55764
D = 0.96079
E = 0.86181
F = 1.08149
$\frac{B}{A+B}$ = 0.66182
ac = 0.66182
R = 0.34185
Equation unfinished

c
a
A
R
B
C
E
D
F

Unit = 1.00000

A = 0.19071

B = 0.33072

C = 0.55764

D = 1.00182

E = 0.86181

F = 1.08149

$\frac{A}{B}$ = 0.57664

ac = 0.57664

R = 0.39659

Equation unfinished

c

a

A

B

R

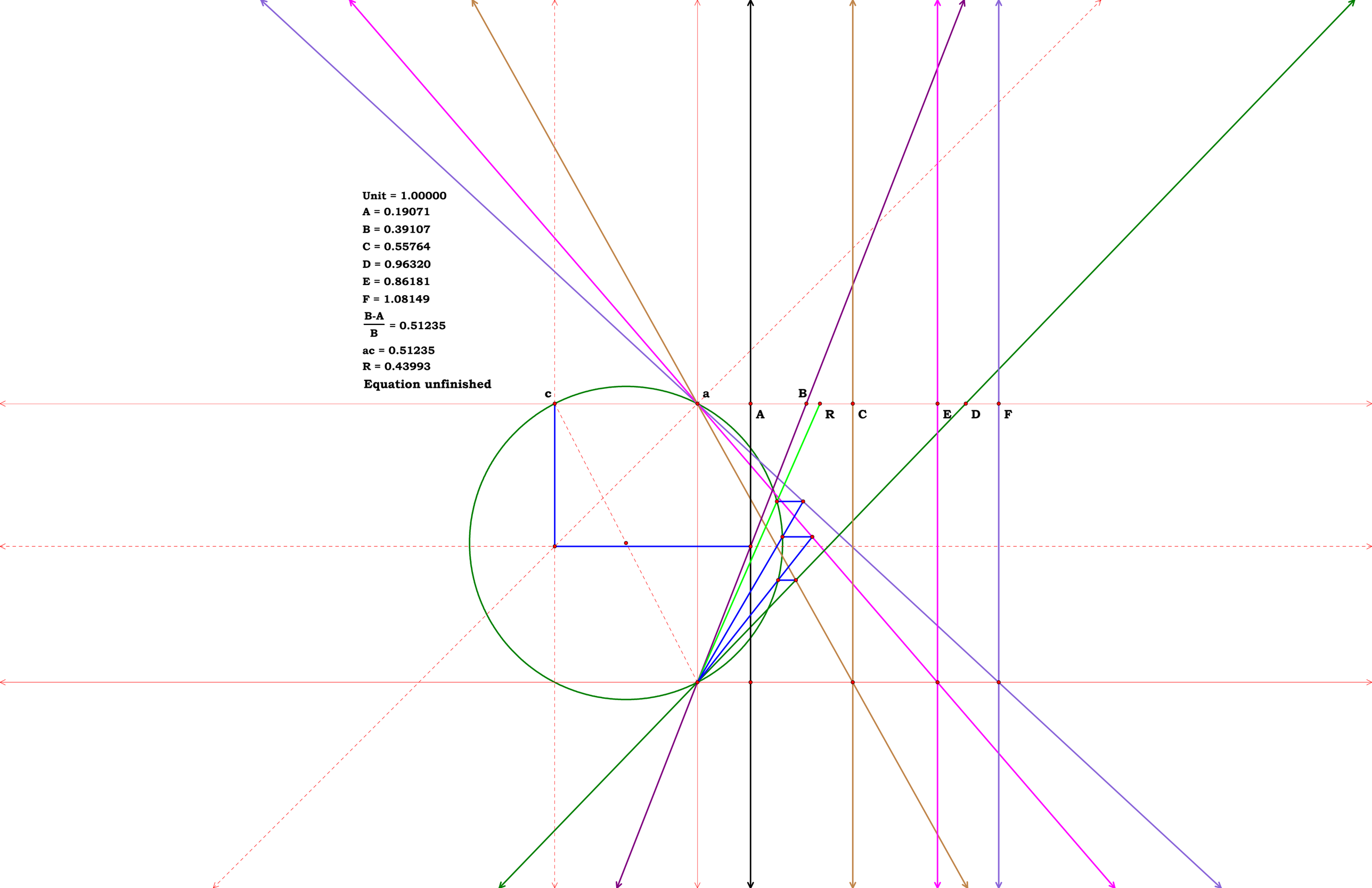
C

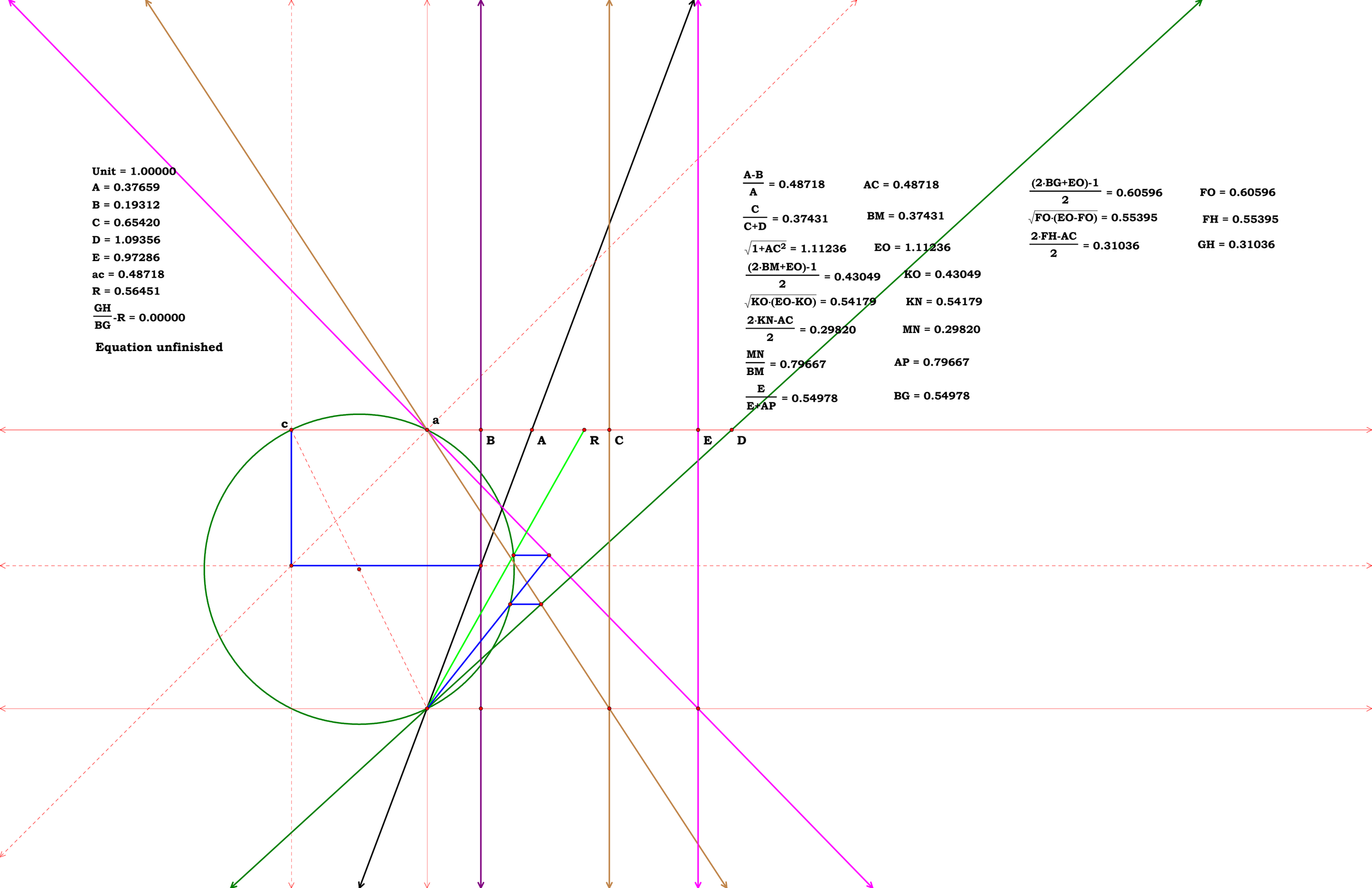
E

D

F

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.96320
E = 0.86181
F = 1.08149
$\frac{B-A}{B}$ = 0.51235
ac = 0.51235
R = 0.43993
Equation unfinished




Unit = 1.00000
A = 0.37659
B = 0.19312
C = 0.65420
D = 1.09356
E = 0.97286
ac = 0.48718
R = 0.56451
GH/BG-R = 0.00000
Equation unfinished
A-B/A = 0.48718
AC = 0.48718
C/C+D = 0.37431
BM = 0.37431
√1+AC² = 1.11236
EO = 1.11236
(2·BM+EO)-1/2 = 0.43049
KO = 0.43049
√KO·(EO-KO) = 0.54179
KN = 0.54179
2·KN-AC/2 = 0.29820
MN = 0.29820
MN/BM = 0.79667
AP = 0.79667
E/E+AP = 0.54978
BG = 0.54978
(2·BG+EO)-1/2 = 0.60596
FO = 0.60596
√FO·(EO-FO) = 0.55395
FH = 0.55395
2·FH-AC/2 = 0.31036
GH = 0.31036
c
a
B
A
R
C
E
D

Unit = 1.00000

A = 0.34038

B = 0.23175

C = 0.55764

D = 0.99700

E = 0.86181

$\frac{B}{A}$ = 0.68085

ac = 0.68085

R = 0.47186

Equation unfinished

c

a

B

A

R

C

E

D

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.65420
D = 1.35669
E = 1.04769
$\frac{A}{A+B}$ = 0.32780
ac = 0.32780
R = 0.71555
Equation unfinished

c
a
A
B
C
R
E
D

Unit = 1.00000
A = 0.22451
B = 0.34279
C = 0.55764
D = 1.03562
E = 0.86181
$\frac{B}{A+B}$ = 0.60426
ac = 0.60426
R = 0.52559
Equation unfinished

c
a
A
B
R
C
E
D

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.67110

D = 1.08149

E = 1.00907

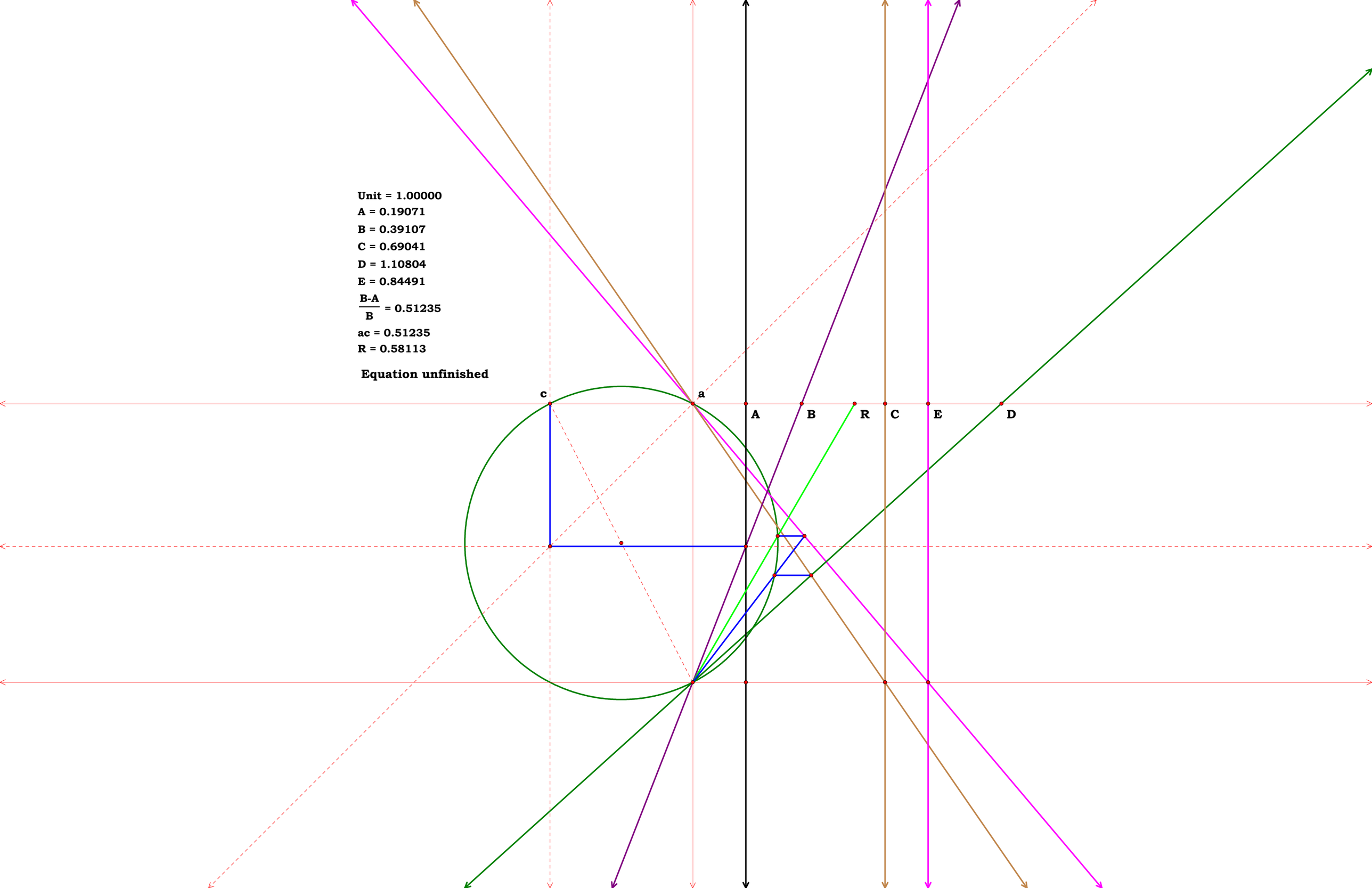
$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 0.54870

Equation unfinished

c a A B R C E D


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.69041
D = 1.10804
E = 0.84491
B-A / B = 0.51235
ac = 0.51235
R = 0.58113
Equation unfinished
c
a
A
B
R
C
E
D

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.06459

D = 0.70731

E = 0.86181

$\frac{A-B}{A}$ = 0.38462

ac = 0.38462

R = 0.50275

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c

a

B

A

R

D

E

C

Unit = 1.00000

A = 0.37659

B = 0.19071

C = 0.53109

D = 1.10563

E = 0.92940

$\frac{B}{A}$ = 0.50641

ac = 0.50641

R = 0.67484

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c a B A C R E D

Unit = 1.00000

A = 0.29451

B = 0.61799

C = 0.83284

D = 1.64879

E = 1.27461

$\frac{A}{A+B}$ = 0.32275

ac = 0.32275

R = 0.99664

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c a A B C R E D

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.58420

D = 1.05493

E = 0.96561

$\frac{B}{A+B}$ = 0.63529

ac = 0.63529

R = 0.71490

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c a A B C R E D

Unit = 1.00000

A = 0.17864

B = 0.40073

C = 0.65662

D = 1.21667

E = 1.00424

$\frac{A}{B}$ = 0.44578

ac = 0.44578

R = 0.73639

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c a A B C R E D

Unit = 1.00000

A = 0.19071

B = 0.43935

C = 0.82801

D = 0.92216

E = 0.99941

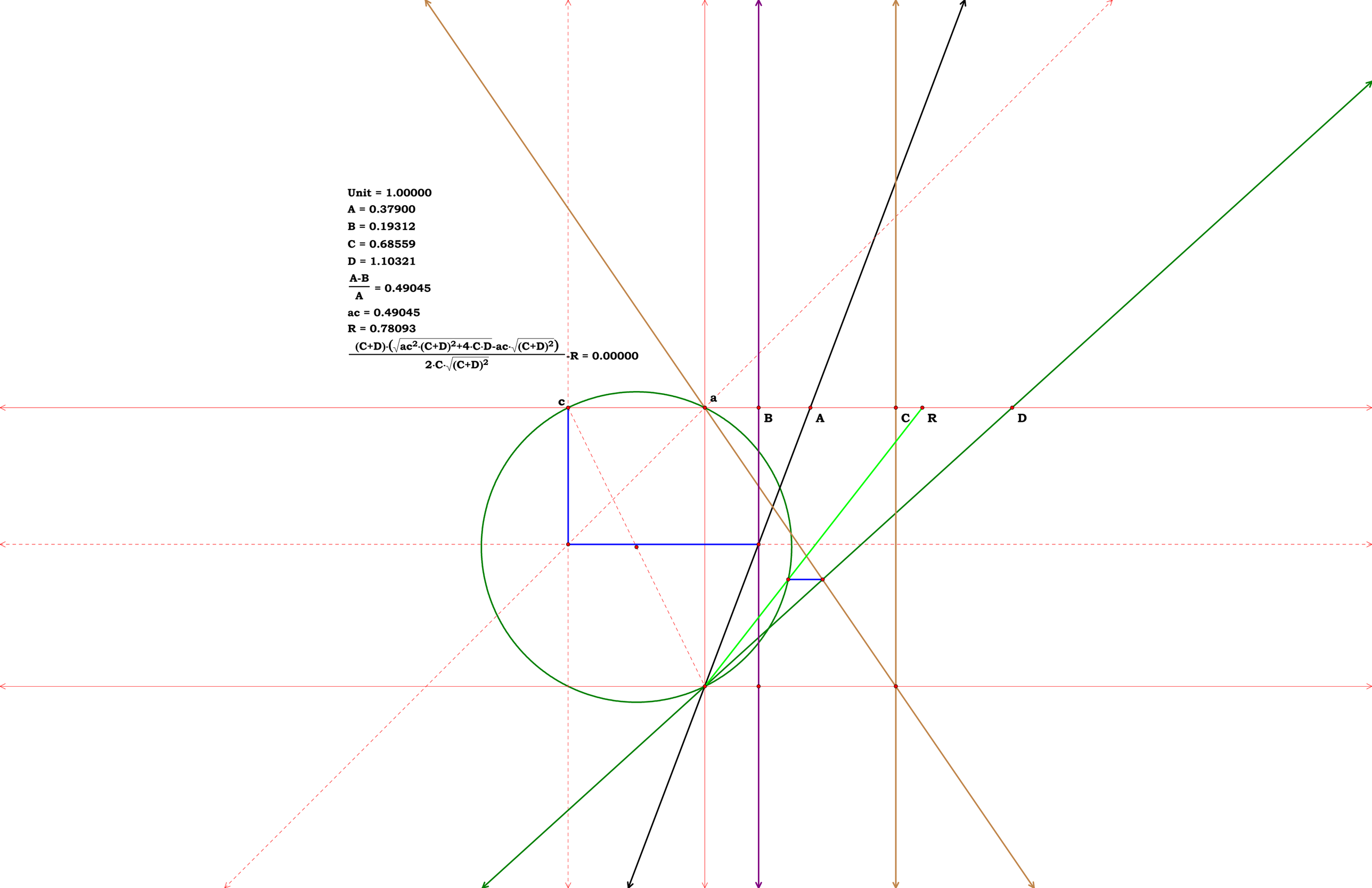
$\frac{B-A}{B}$ = 0.56593

ac = 0.56593

R = 0.71651

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(C^2+1)}$-R = 0.00000

c a A B R C D E


Unit = 1.00000
A = 0.37900
B = 0.19312
C = 0.68559
D = 1.10321
(A-B)/A = 0.49045
ac = 0.49045
R = 0.78093
((C+D)·(√(ac²·(C+D)²+4·C·D)-ac·√((C+D)²)))/(2·C·√((C+D)²))-R = 0.00000
c
a
B
A
C
R
D

Unit = 1.00000

A = 0.37418

B = 0.23175

C = 0.77973

D = 1.03321

$\frac{B}{A}$ = 0.61935

ac = 0.61935

R = 0.63774

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot(C+D)+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot C\cdot\sqrt{(C+D)^2}}$ -R = -0.08849

c

a

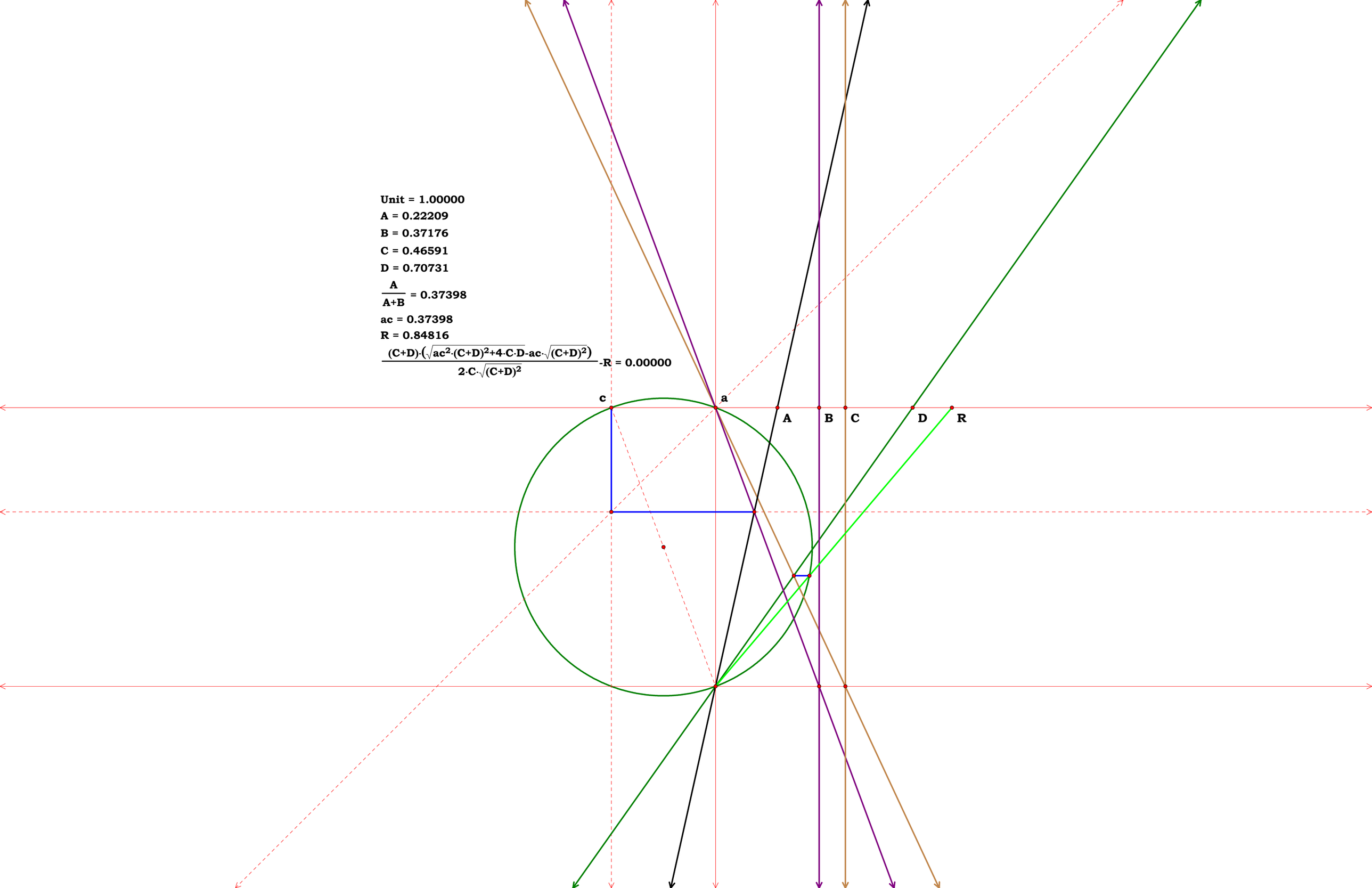
B

A

R

C

D


Unit = 1.00000
A = 0.22209
B = 0.37176
C = 0.46591
D = 0.70731
A/(A+B) = 0.37398
ac = 0.37398
R = 0.84816
((C+D)·(√(ac²·(C+D)²+4·C·D)-ac·√((C+D)²)))/(2·C·√((C+D)²))-R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.55764

D = 0.91251

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 0.69151

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot(C+D)^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot C\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c

a

A

B

C

R

D

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.59385

D = 0.87147

$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 0.75093

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot(C+D)^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot C\cdot\sqrt{(C+D)^2}}$-R = 0.00000

c

a

A

B

C

R

D

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 1.10563

$\frac{B-A}{B}$ = 0.51235

ac = 0.51235

R = 0.83795

$\frac{(C+D)\cdot\left(\sqrt{ac^2\cdot(C+D)^2+4\cdot C\cdot D}-ac\cdot\sqrt{(C+D)^2}\right)}{2\cdot C\cdot\sqrt{(C+D)^2}}$ -R = 0.00000

c

a

A

B

C

R

D

Unit = 1.00000
A = 0.44660
B = 0.17622
C = 0.91733
D = 1.13701
E = 1.62706

$\frac{A-B}{A} = 0.60541$

ac = 0.60541

$\frac{C}{C+D} = 0.44653$

bn = 0.44653

R = 0.21835

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn-2\cdot ac\cdot E\right)+ac^2\cdot(E^2-2)+4\cdot bn\cdot(bn-1)}-ac\cdot\sqrt{E^2}\right)}{E\cdot\left((ac+2\cdot E)-\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn\right)}-R = 0.00000$$

B R A C D E

Unit = 1.00000
A = 0.57937
B = 0.14726
C = 0.91733
D = 0.95596
E = 1.62706
R = 0.41764

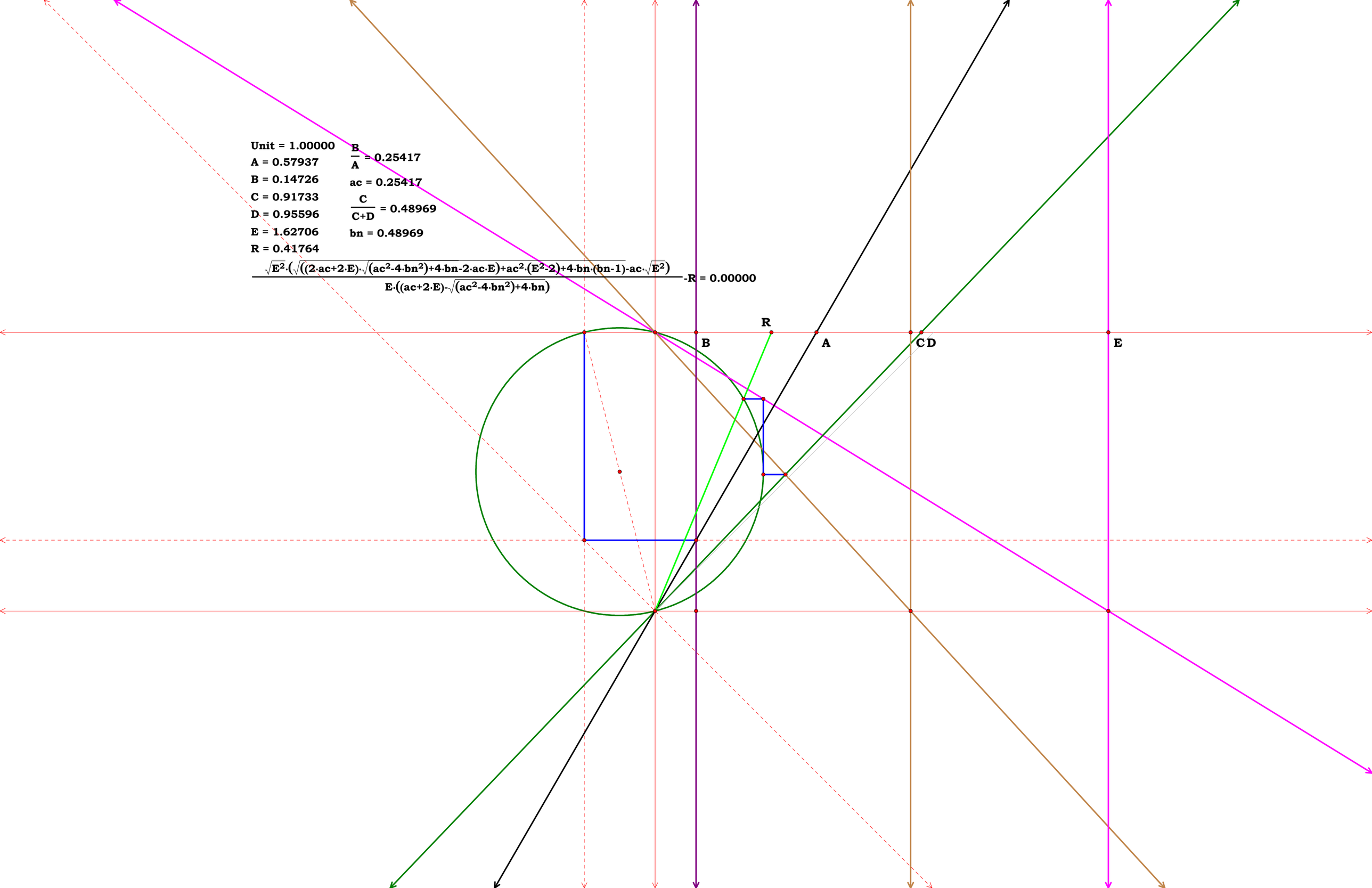
$\frac{B}{A} = 0.25417$

$ac = 0.25417$

$\frac{C}{C+D} = 0.48969$

$bn = 0.48969$

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn-2\cdot ac\cdot E\right)+ac^2\cdot(E^2-2)+4\cdot bn\cdot(bn-1)}-ac\cdot\sqrt{E^2}\right)}{E\cdot\left((ac+2\cdot E)-\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn\right)}-R = 0.00000$$



Unit = 1.00000

A = 0.21002

B = 0.66627

C = 0.91733

D = 0.95596

E = 0.44418

R = 1.93888

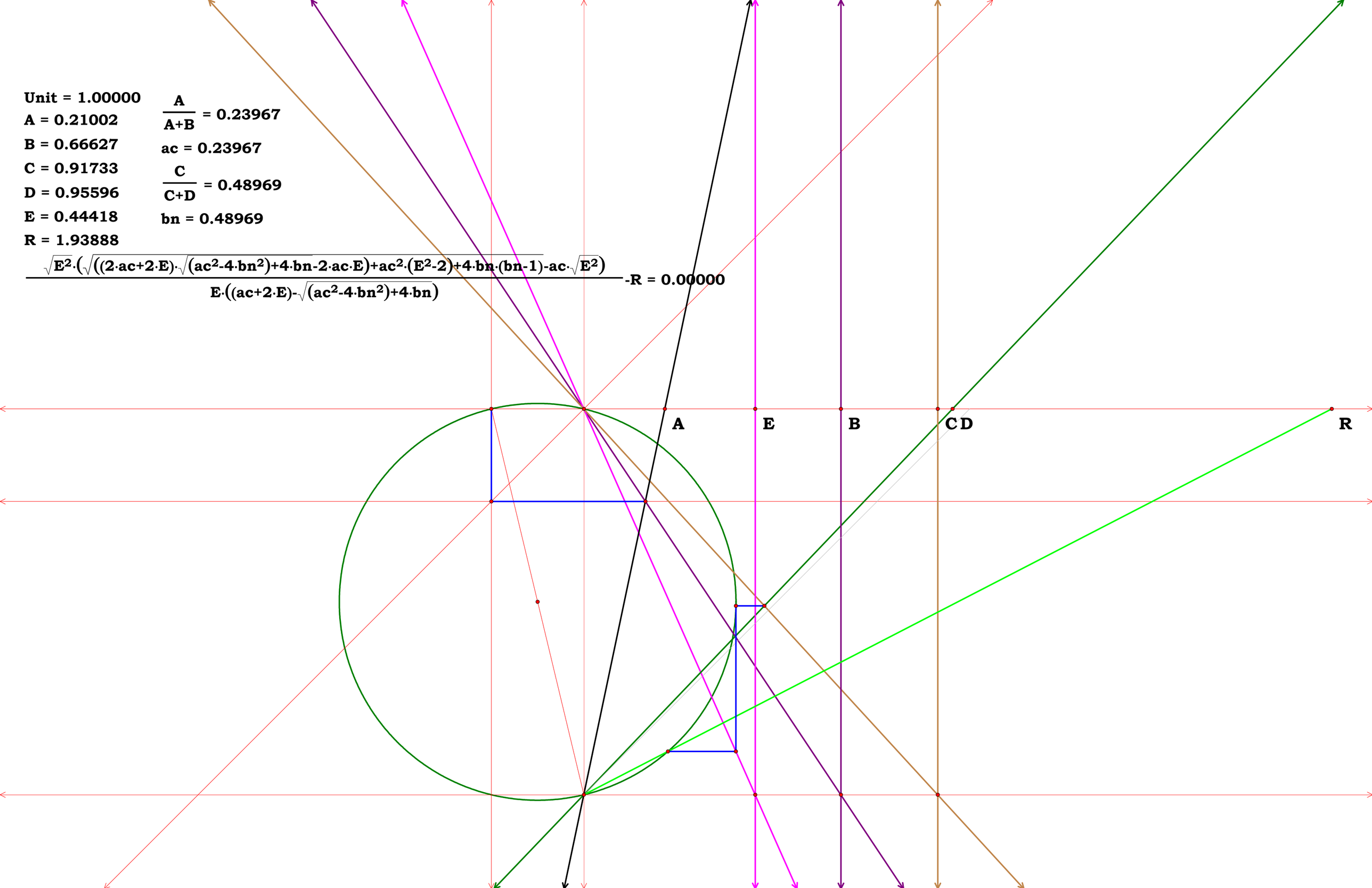
$$\frac{A}{A+B} = 0.23967$$

ac = 0.23967

$$\frac{C}{C+D} = 0.48969$$

bn = 0.48969

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{\left(ac^2-4\cdot bn^2\right)}+4\cdot bn-2\cdot ac\cdot E\right)}+ac^2\cdot\left(E^2-2\right)+4\cdot bn\cdot(bn-1)\right)-ac\cdot\sqrt{E^2}}{E\cdot\left((ac+2\cdot E)-\sqrt{\left(ac^2-4\cdot bn^2\right)}+4\cdot bn\right)} - R = 0.00000$$



Unit = 1.00000
A = 0.24140
B = 0.41039
C = 0.79663
D = 0.62041
E = 0.31141
R = 1.13649

$\frac{B}{A+B} = 0.62963$

ac = 0.62963

$\frac{C}{C+D} = 0.56218$

bn = 0.56218

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn-2\cdot ac\cdot E\right)}+ac^2\cdot(E^2-2)+4\cdot bn\cdot(bn-1)-ac\cdot\sqrt{E^2}\right)}{E\cdot\left((ac+2\cdot E)-\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn\right)} - R = 0.00000$$

A E B D C R

Unit = 1.00000

A = 0.18588

B = 0.54074

C = 0.91733

D = 0.95596

E = 1.36634

R = 0.40571

$\frac{A}{B} = 0.34375$

$ac = 0.34375$

$\frac{C}{C+D} = 0.48969$

$bn = 0.48969$

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn-2\cdot ac\cdot E\right)+ac^2\cdot(E^2-2)+4\cdot bn\cdot(bn-1)}-ac\cdot\sqrt{E^2}\right)}{E\cdot\left((ac+2\cdot E)-\sqrt{(ac^2-4\cdot bn^2)}+4\cdot bn\right)}-R = 0.00000$$

A R B C D E

Unit = 1.00000
A = 0.44660
B = 0.67110
C = 0.91733
D = 0.95596
E = 1.62706
R = 0.35979

$\frac{B-A}{B} = 0.33453$

ac = 0.33453

$\frac{C}{C+D} = 0.48969$

bn = 0.48969

$$\frac{\sqrt{E^2}\cdot\left(\sqrt{\left((2\cdot ac+2\cdot E)\cdot\sqrt{(ac^2-4\cdot bn^2)+4\cdot bn}-2\cdot ac\cdot E\right)+ac^2\cdot(E^2-2)+4\cdot bn\cdot(bn-1)}-ac\cdot\sqrt{E^2}\right)}{E\cdot\left((ac+2\cdot E)-\sqrt{(ac^2-4\cdot bn^2)+4\cdot bn}\right)}-R = 0.00000$$

R A B C D E

Unit = 1.00000

A = 0.31624

B = 0.19554

C = 0.55764

D = 0.48039

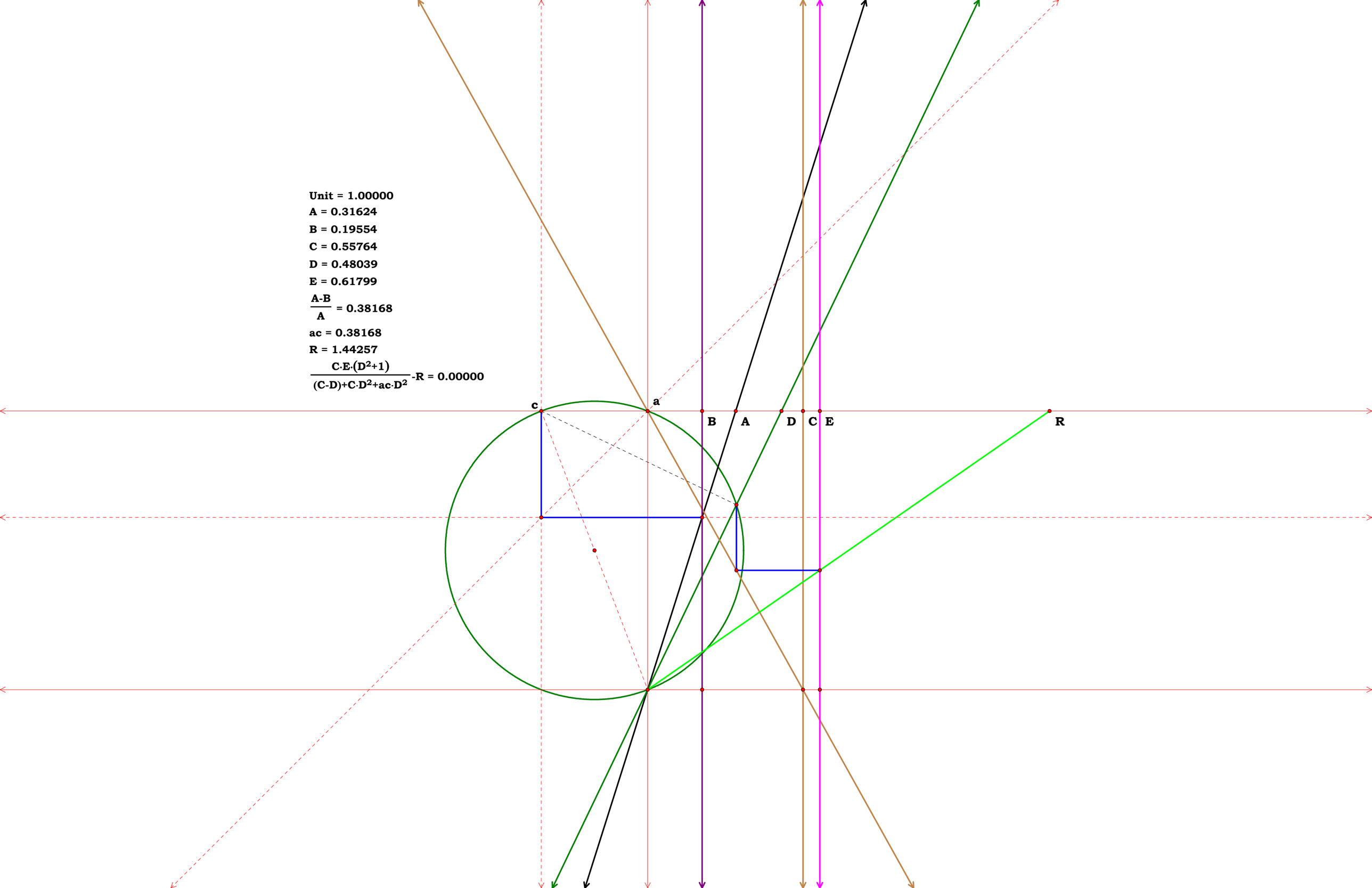
E = 0.61799

$\frac{A-B}{A}$ = 0.38168

ac = 0.38168

R = 1.44257

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2}-R$ = 0.00000



Unit = 1.00000

A = 0.43453

B = 0.18829

C = 0.84008

D = 0.68800

E = 1.08149

$\frac{B}{A}$ = 0.43333

ac = 0.43333

R = 1.77333

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2}$ -R = 0.00000

c a B A D C E R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 0.70731

E = 0.86181

$\frac{A}{A+B}$ = 0.32780

ac = 0.32780

R = 2.45820

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2}$ -R = 0.00000

c a A B C D E R

Unit = 1.00000

A = 0.22451

B = 0.46591

C = 0.55764

D = 0.70731

E = 0.86181

$\frac{B}{A+B} = 0.67483$

ac = 0.67483

R = 1.54418

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2} - R = 0.00000$

c a A B C D E R

Unit = 1.00000

A = 0.21968

B = 0.39107

C = 0.67110

D = 0.77491

E = 0.86181

$\frac{A}{B}$ = 0.56173

ac = 0.56173

R = 1.45433

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2}$ -R = 0.00000

c a A B C D E R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.65420

D = 0.77732

E = 0.86181

$\frac{B-A}{B}$ = 0.51235

ac = 0.51235

R = 1.55474

$\frac{C \cdot E \cdot (D^2+1)}{(C-D)+C \cdot D^2+ac \cdot D^2}-R$ = 0.00000

c a A B C D E R

Unit = 1.00000

A = 0.40314

B = 0.28486

C = 0.54316

D = 0.73387

E = 0.89078

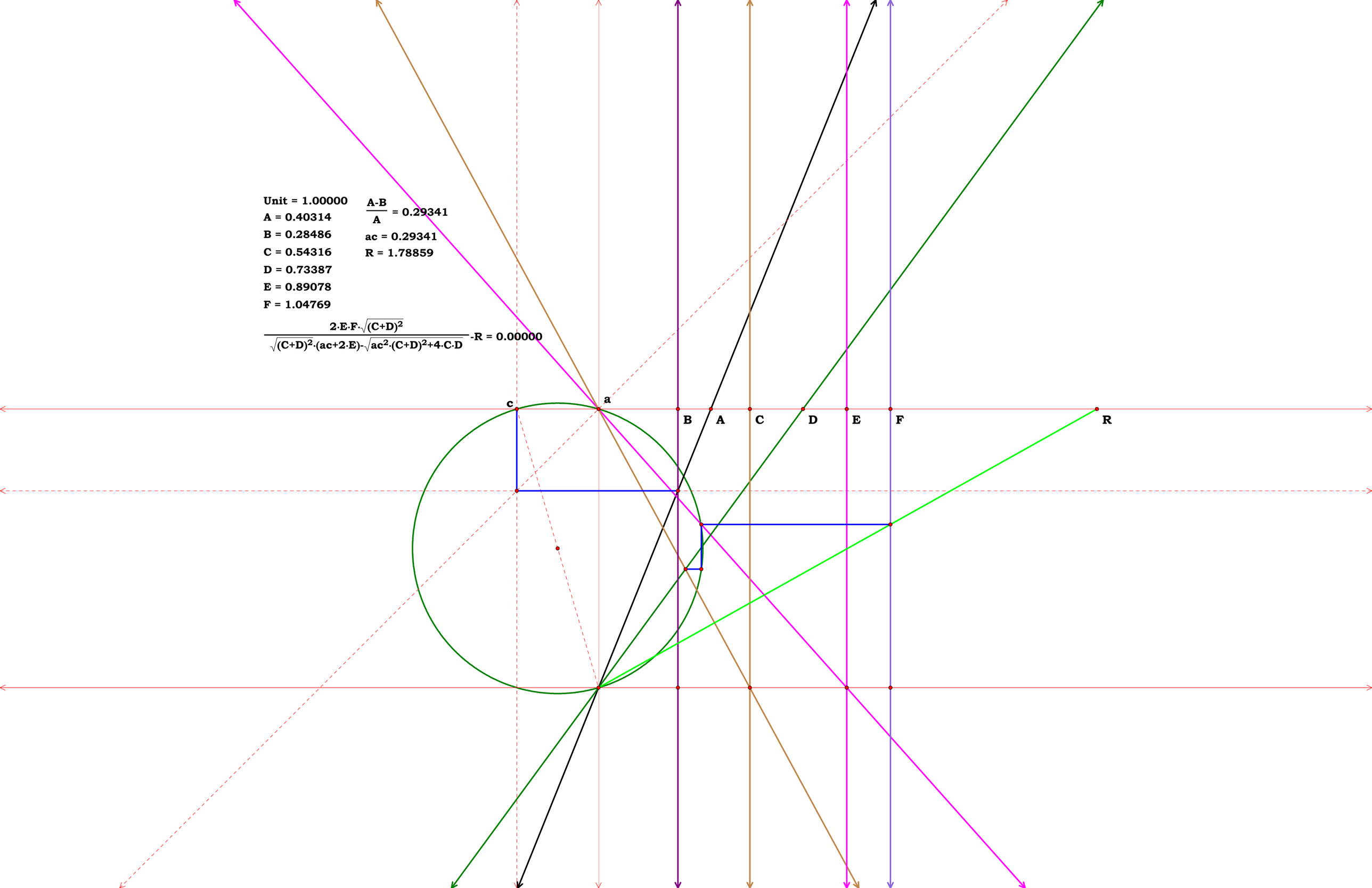
F = 1.04769

$\frac{A-B}{A} = 0.29341$

ac = 0.29341

R = 1.78859

$\frac{2 \cdot E \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 \cdot (ac+2 \cdot E)} - \sqrt{ac^2 \cdot (C+D)^2 + 4 \cdot C \cdot D}} - R = 0.00000$



Unit = 1.00000
A = 0.42728
B = 0.23175
C = 0.55764
D = 0.96320
E = 1.27220
F = 0.85940

$\frac{B}{A} = 0.54237$

ac = 0.54237

R = 1.10389

$\frac{2 \cdot E \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 \cdot (ac+2 \cdot E) - \sqrt{ac^2 \cdot (C+D)^2 + 4 \cdot C \cdot D}}} - R = 0.00000$

c
a
B
A
C
F
D
R
E

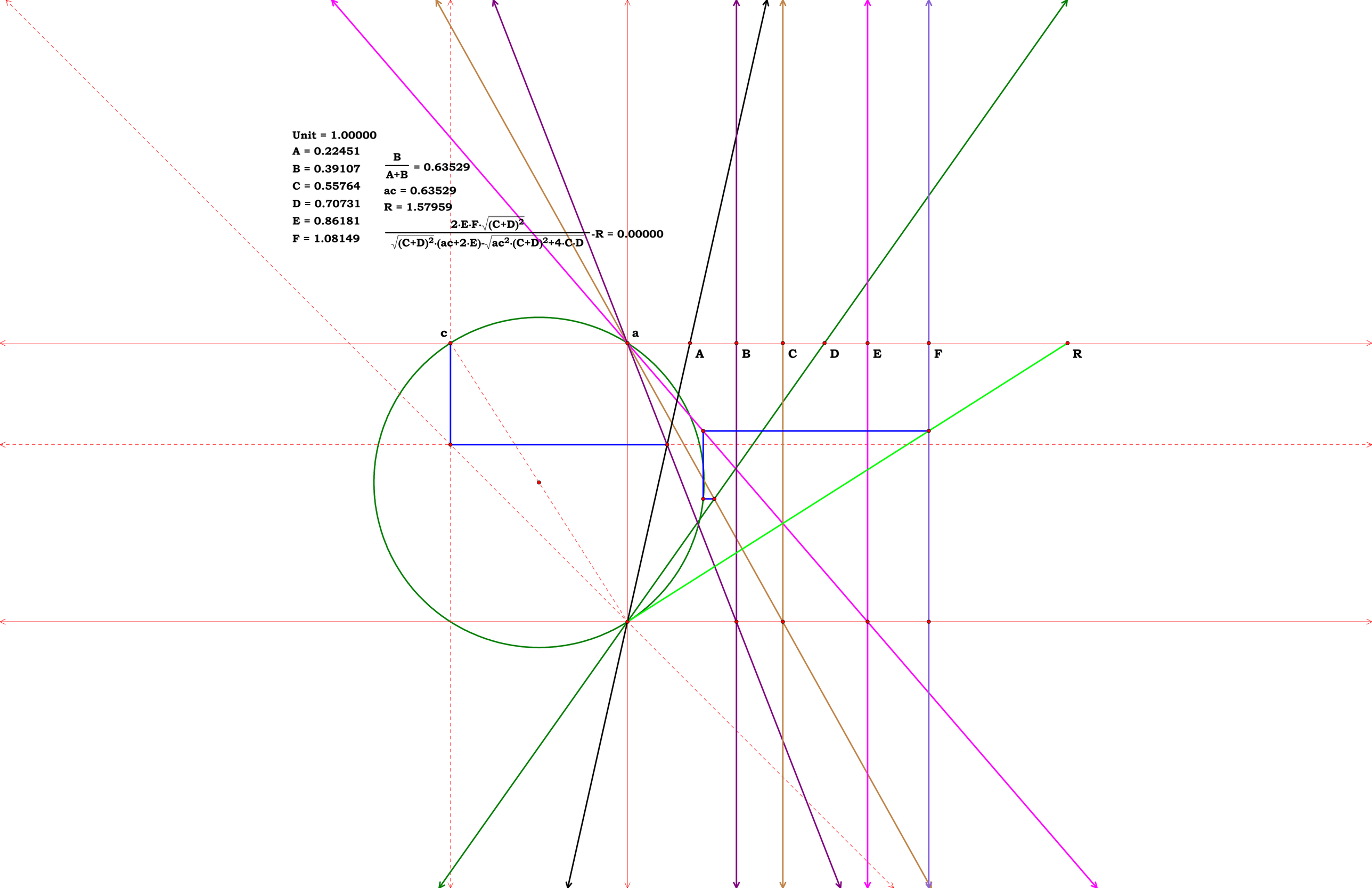
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.95596
F = 0.80146

$$\frac{A}{A+B} = 0.32780$$

ac = 0.32780
R = 1.28332

$$\frac{2\cdot E\cdot F\cdot\sqrt{(C+D)^2}}{\sqrt{(C+D)^2}\cdot(ac+2\cdot E)-\sqrt{ac^2\cdot(C+D)^2+4\cdot C\cdot D}} - R = 0.00000$$

c
a
A
B
C
D
F
E
R


Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.86181
F = 1.08149
B / (A+B) = 0.63529
ac = 0.63529
R = 1.57959
2·E·F·√((C+D)²) / (√((C+D)²)·(ac+2·E)-√(ac²·(C+D)²+4·C·D)) -R = 0.00000
c
a
A
B
C
D
E
F
R

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.59627
D = 0.98493
E = 1.19736
F = 1.08149

$\frac{A}{B} = 0.48765$

ac = 0.48765

R = 1.44097

$\frac{2 \cdot E \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 \cdot (ac+2 \cdot E) - \sqrt{ac^2 \cdot (C+D)^2 + 4 \cdot C \cdot D}}} - R = 0.00000$

c
a
A
B
C
D
F
E
R

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.97286
E = 0.86181
F = 1.08149

$\frac{B-A}{B} = 0.51235$

ac = 0.51235
R = 1.62716

$\frac{2 \cdot E \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 \cdot (ac+2 \cdot E) - \sqrt{ac^2 \cdot (C+D)^2 + 4 \cdot C \cdot D}}} - R = 0.00000$

c a A B C E D F R

Unit = 1.00000

A = 0.31141

B = 0.13519

C = 1.36152

D = 0.76042

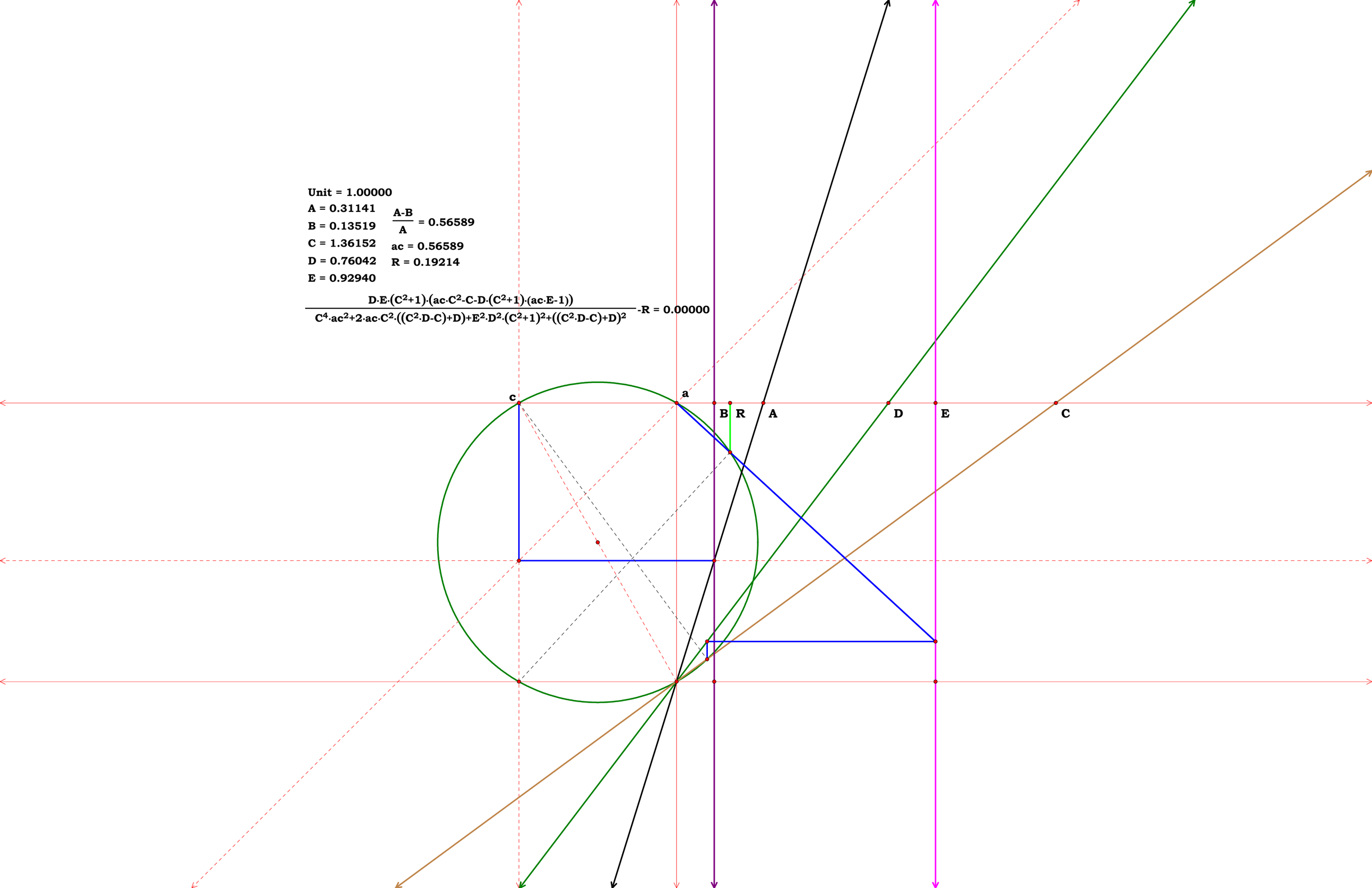
E = 0.92940

$\frac{A-B}{A} = 0.56589$

$ac = 0.56589$

$R = 0.19214$

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{C^4\cdot ac^2+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+E^2\cdot D^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2}-R = 0.00000$$



Unit = 1.00000

A = 0.39832

B = 0.19312 $\quad \frac{B}{A} = 0.48485$

C = 0.98251 $\quad ac = 0.48485$

D = 0.64455 $\quad R = 0.29018$

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{C^4\cdot ac^2+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+D^2\cdot E^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2}-R = 0.00000$$

c a B R A E D C

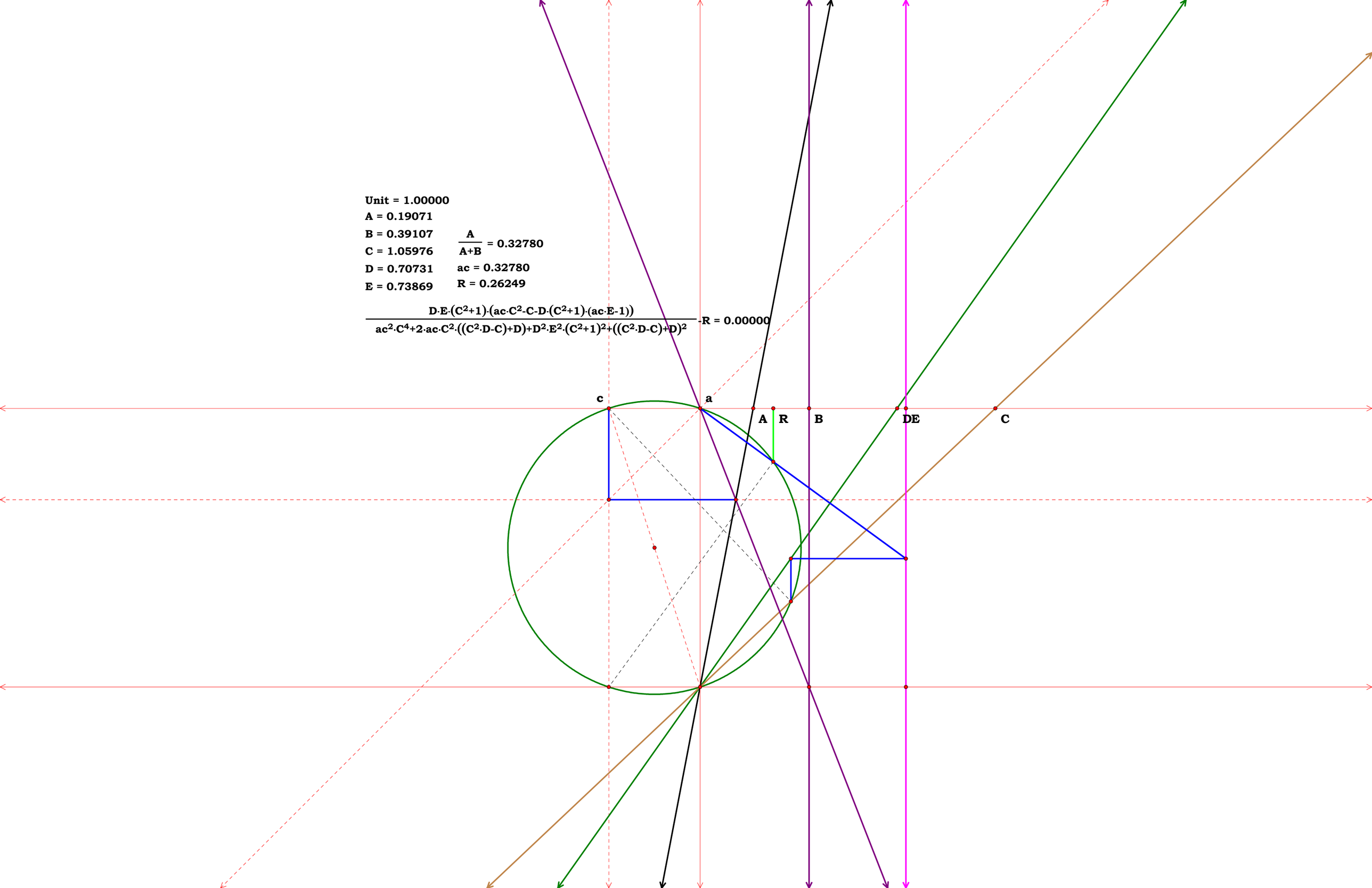
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.05976
D = 0.70731
E = 0.73869

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.26249

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{ac^2\cdot C^4+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+D^2\cdot E^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2}-R = 0.00000$$



Unit = 1.00000
A = 0.14967
B = 0.37659
C = 1.05252
D = 0.70731
E = 0.54799

$\frac{B}{A+B} = 0.71560$

ac = 0.71560

R = 0.24193

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{ac^2\cdot C^4+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+D^2\cdot E^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2}-R = 0.00000$$

c a A R B E D C

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.65179
D = 1.08149
E = 0.70490

$\frac{A}{B} = 0.48765$

ac = 0.48765

R = 0.25841

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{ac^2\cdot C^4+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+D^2\cdot E^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2} - R = 0.00000$$

c
a
A
R
B
C
E
D

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.55764

D = 1.27461

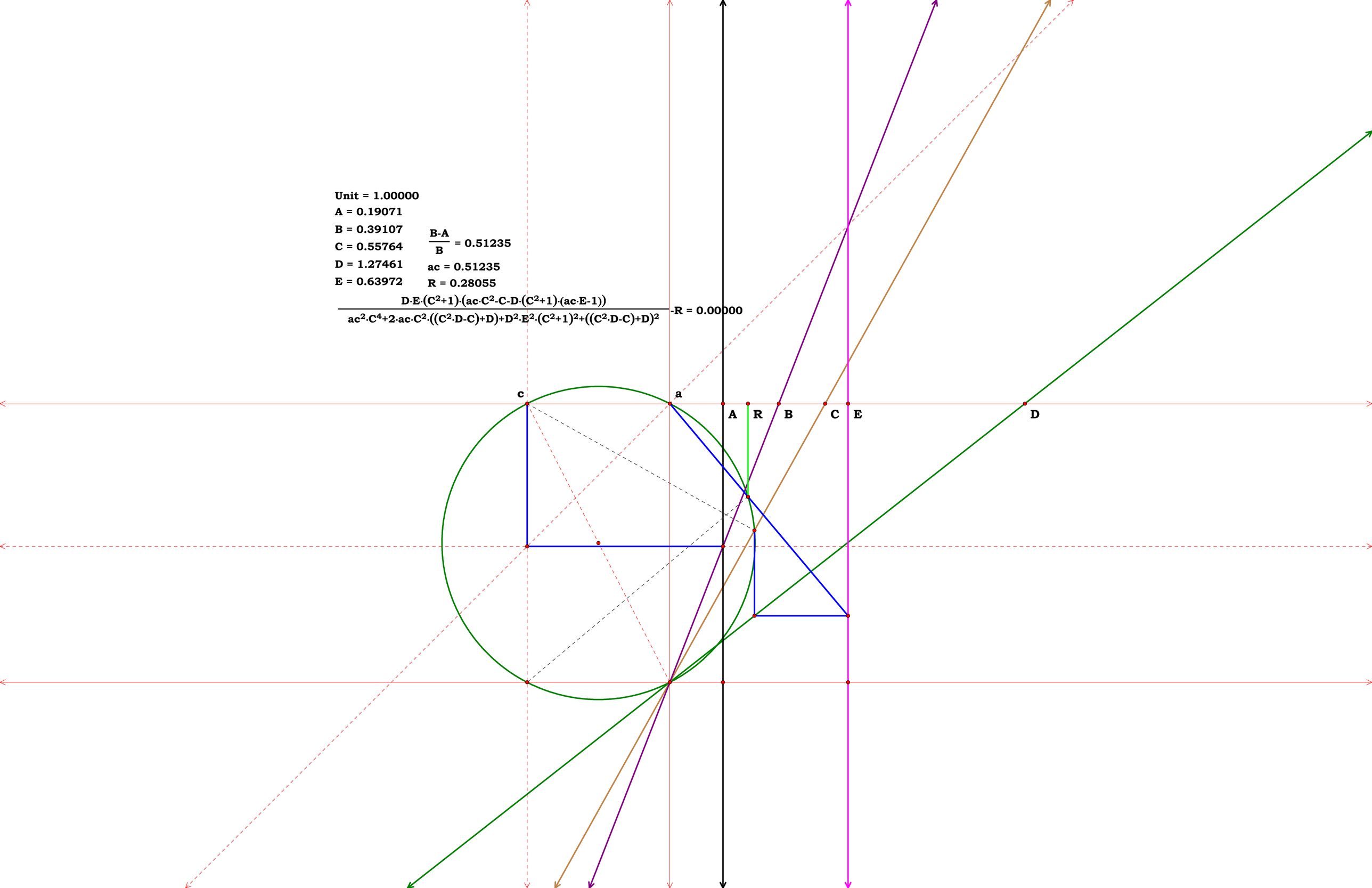
E = 0.63972

$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 0.28055

$$\frac{D\cdot E\cdot(C^2+1)\cdot(ac\cdot C^2-C-D\cdot(C^2+1)\cdot(ac\cdot E-1))}{ac^2\cdot C^4+2\cdot ac\cdot C^2\cdot((C^2\cdot D-C)+D)+D^2\cdot E^2\cdot(C^2+1)^2+((C^2\cdot D-C)+D)^2} - R = 0.00000$$



Unit = 1.00000

A = 0.31382

B = 0.19312

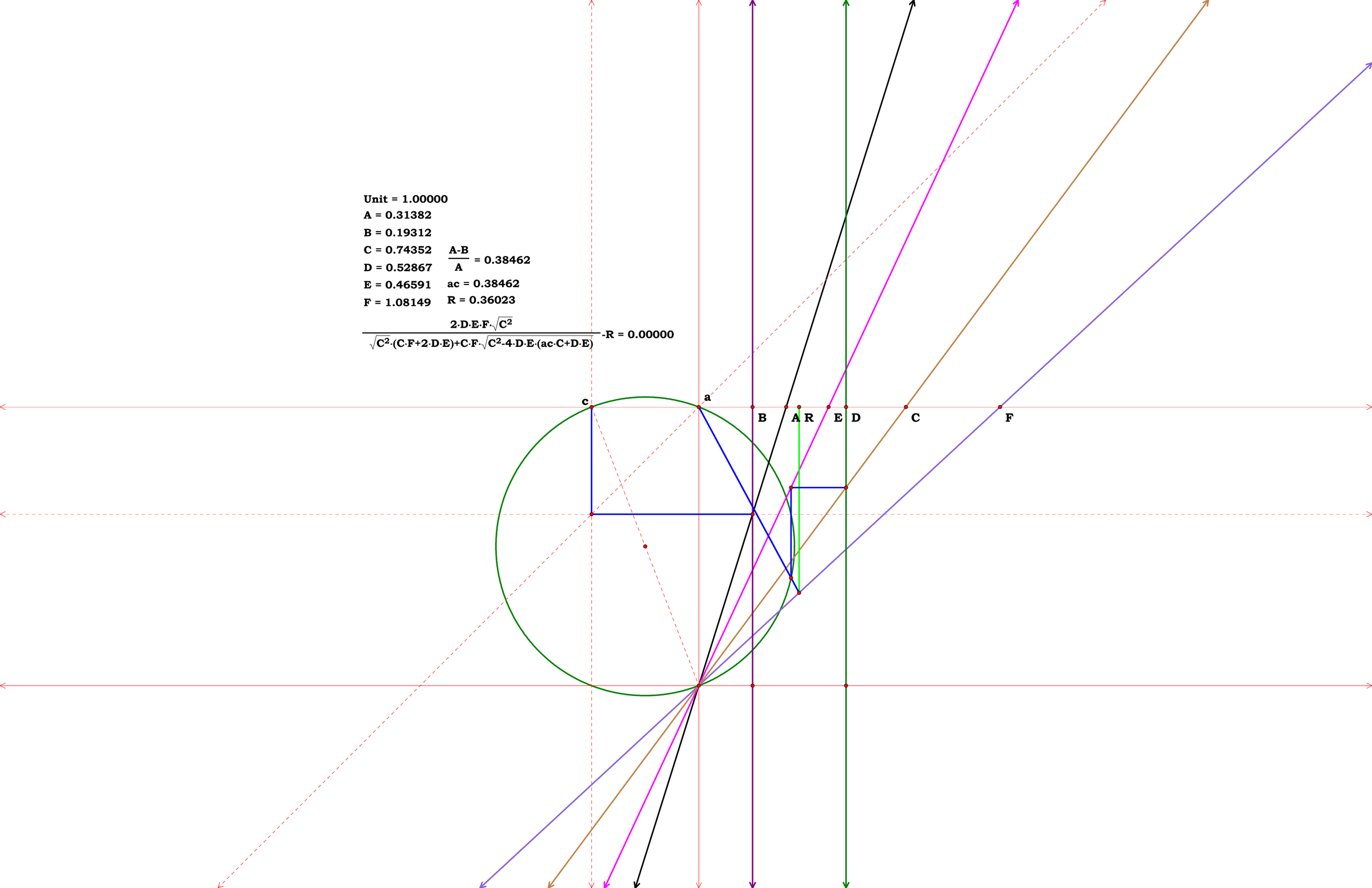
C = 0.74352 $\frac{A-B}{A} = 0.38462$

D = 0.52867

E = 0.46591 ac = 0.38462

F = 1.08149 R = 0.36023

$$\frac{2\cdot D\cdot E\cdot F\cdot\sqrt{C^2}}{\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot D\cdot E\cdot(ac\cdot C+D\cdot E)}} - R = 0.00000$$



Unit = 1.00000
A = 0.42004
B = 0.23175
C = 1.23116
D = 0.70731
E = 0.48281
F = 1.08149

$\frac{B}{A} = 0.55172$

ac = 0.55172
R = 0.30889

$\frac{2 \cdot D \cdot E \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2 \cdot (C \cdot F + 2 \cdot D \cdot E) + C \cdot F \cdot \sqrt{C^2 - 4 \cdot D \cdot E \cdot (ac \cdot C + D \cdot E)}}} - R = 0.00000$

c a B R A E D F C

Unit = 1.00000

A = 0.19071

B = 0.62765

C = 1.22392

D = 0.70731

E = 0.62282

F = 1.70431

$\frac{A}{A+B} = 0.23304$

ac = 0.23304

R = 0.39885

$\frac{2 \cdot D \cdot E \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2} \cdot (C \cdot F + 2 \cdot D \cdot E) + C \cdot F \cdot \sqrt{C^2 - 4 \cdot D \cdot E \cdot (ac \cdot C + D \cdot E)}} - R = 0.00000$

c

a

A

R

B

D

C

F

Unit = 1.00000
A = 0.15691
B = 0.39107
C = 1.54257
D = 0.70731
E = 0.47798
F = 1.23116

$$\frac{B}{A+B} = 0.71366$$

ac = 0.71366
R = 0.24585

$$\frac{2\cdot D\cdot E\cdot F\cdot\sqrt{C^2}}{\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot D\cdot E\cdot(ac\cdot C+D\cdot E)}} - R = 0.00000$$

c
a
A
R
B
E
D
F
C

Unit = 1.00000
A = 0.19071
B = 0.53592
C = 0.90044
D = 0.70731
E = 0.41039
F = 1.27702

$\frac{A}{B}$ = 0.35586

ac = 0.35586

R = 0.34681

$\frac{2 \cdot D \cdot E \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2 \cdot (C \cdot F + 2 \cdot D \cdot E) + C \cdot F \cdot \sqrt{C^2 - 4 \cdot D \cdot E \cdot (ac \cdot C + D \cdot E)}}}$ -R = 0.00000

c
a
R
A
E
B
D
C
F

Unit = 1.00000

A = 0.19071

B = 0.41280

C = 1.29392

D = 0.71455

E = 0.50453

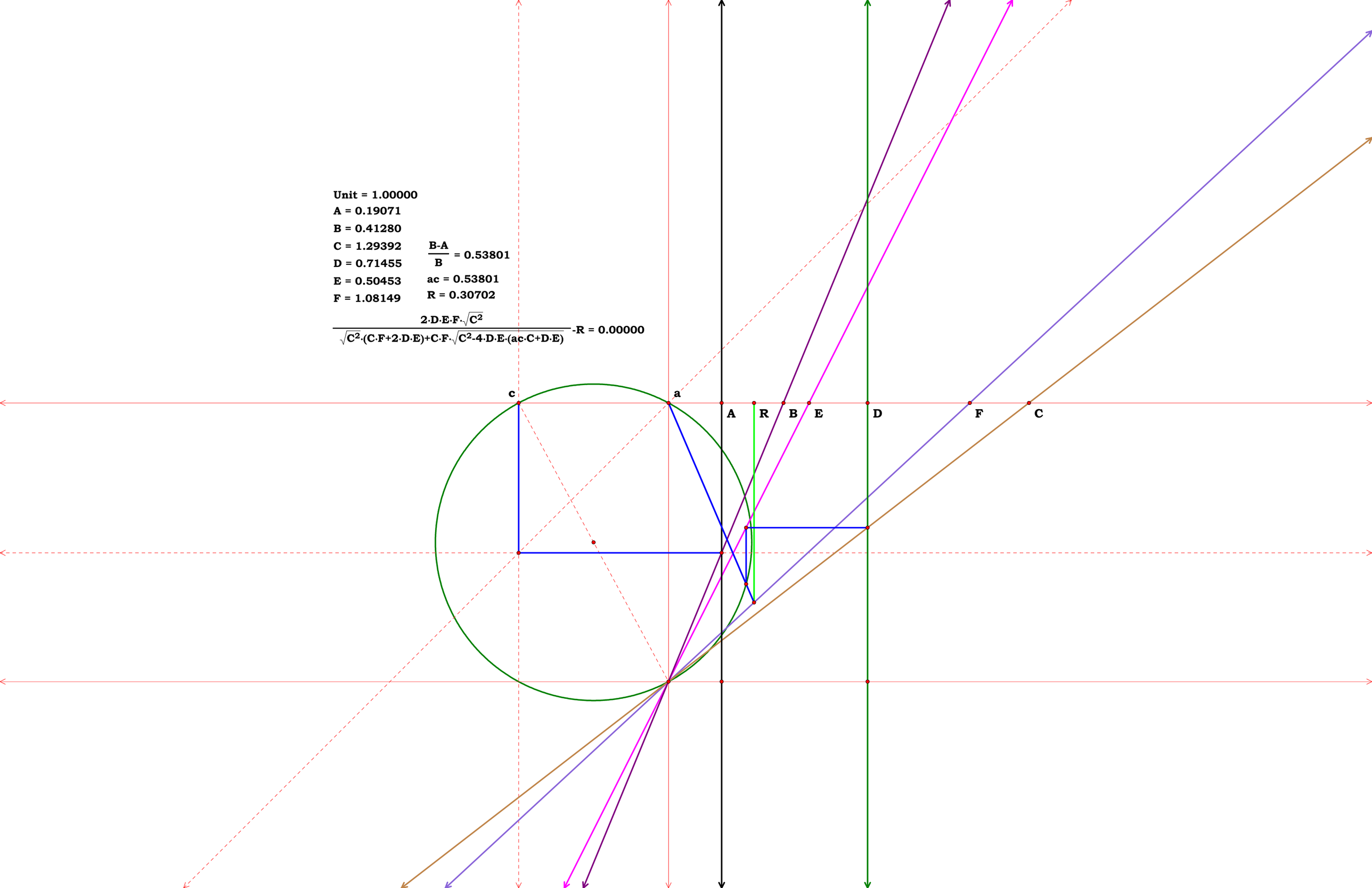
F = 1.08149

$\frac{B-A}{B} = 0.53801$

ac = 0.53801

R = 0.30702

$\frac{2 \cdot D \cdot E \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2} \cdot (C \cdot F + 2 \cdot D \cdot E) + C \cdot F \cdot \sqrt{C^2 - 4 \cdot D \cdot E \cdot (ac \cdot C + D \cdot E)}} - R = 0.00000$



Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.34703

D = 0.91975

E = 0.68317

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.50083

$\frac{((ac\cdot(C^2-D\cdot E\cdot(C^2+1))+C^2\cdot D)-C)+D}{ac^2\cdot C^2+ac\cdot((C^2\cdot D-C)+D)+D\cdot E\cdot(C^2+1)}-R = 0.00000$

c a B A R E D C

Unit = 1.00000
A = 0.40314
B = 0.11587
C = 1.04286
D = 0.74594
E = 0.86181

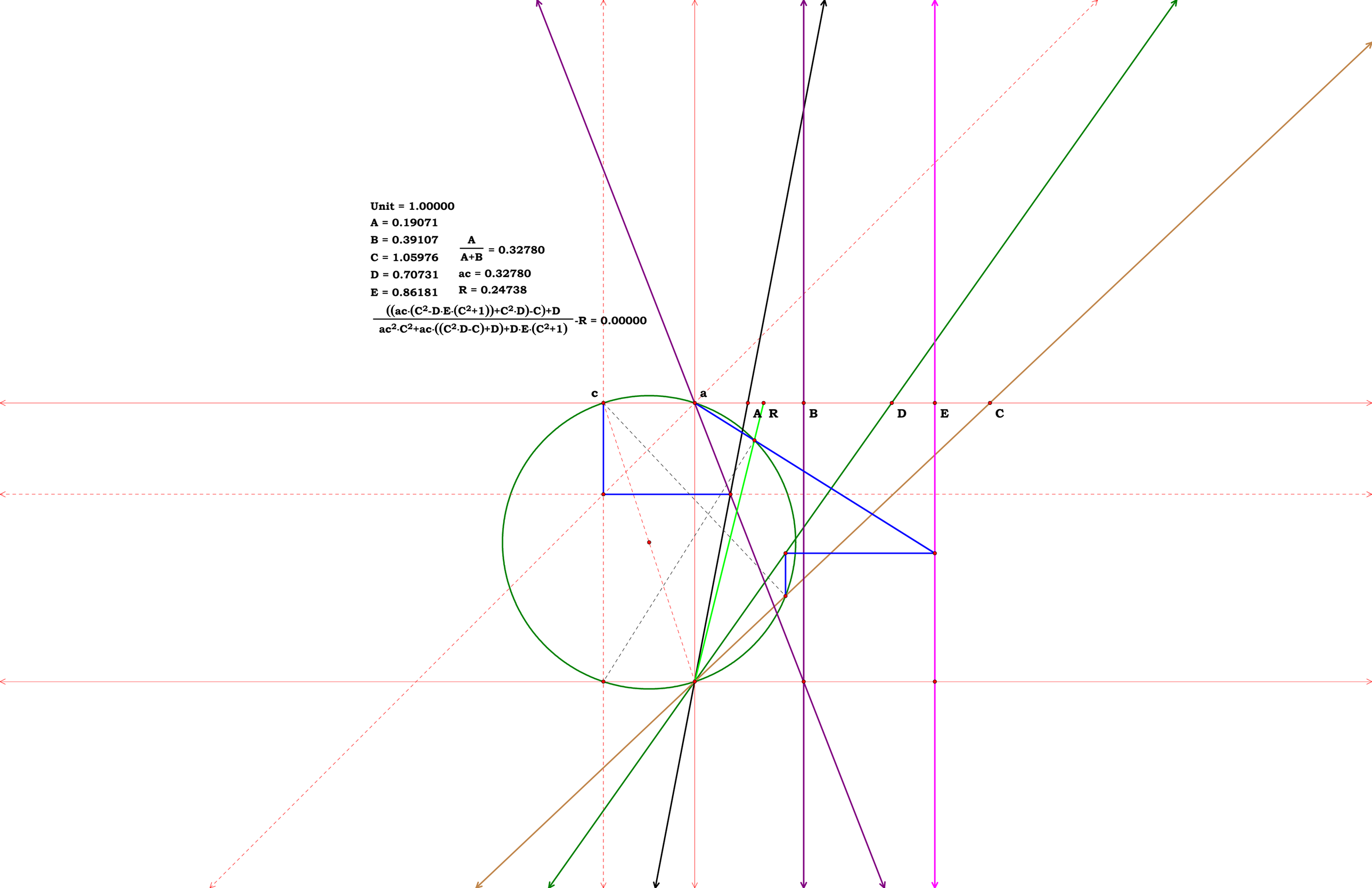
$\frac{B}{A} = 0.28743$

ac = 0.28743

R = 0.27929

$\frac{((ac\cdot(C^2-D\cdot E\cdot(C^2+1))+C^2\cdot D)-C)+D}{ac^2\cdot C^2+ac\cdot((C^2\cdot D-C)+D)+D\cdot E\cdot(C^2+1)}-R = 0.00000$

c a R B A D E C


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.05976
D = 0.70731
E = 0.86181
$\frac{A}{A+B} = 0.32780$
ac = 0.32780
R = 0.24738
$\frac{((ac\cdot(C^2-D\cdot E\cdot(C^2+1))+C^2\cdot D)-C)+D}{ac^2\cdot C^2+ac\cdot((C^2\cdot D-C)+D)+D\cdot E\cdot(C^2+1)}-R = 0.00000$
c
a
A
R
B
D
E
C

Unit = 1.00000
A = 0.48281
B = 0.26554
C = 1.41221
D = 0.60592
E = 0.74111

$\frac{B}{A+B} = 0.35484$

ac = 0.35484
R = 0.36394

$$\frac{((ac\cdot(C^2-D\cdot E\cdot(C^2+1))+C^2\cdot D)-C)+D}{ac^2\cdot C^2+ac\cdot((C^2\cdot D-C)+D)+D\cdot E\cdot(C^2+1)} = 0.36394$$

c a B R A D E C

Unit = 1.00000

A = 0.18588

B = 0.42970 $\frac{A}{B}$ = 0.43258

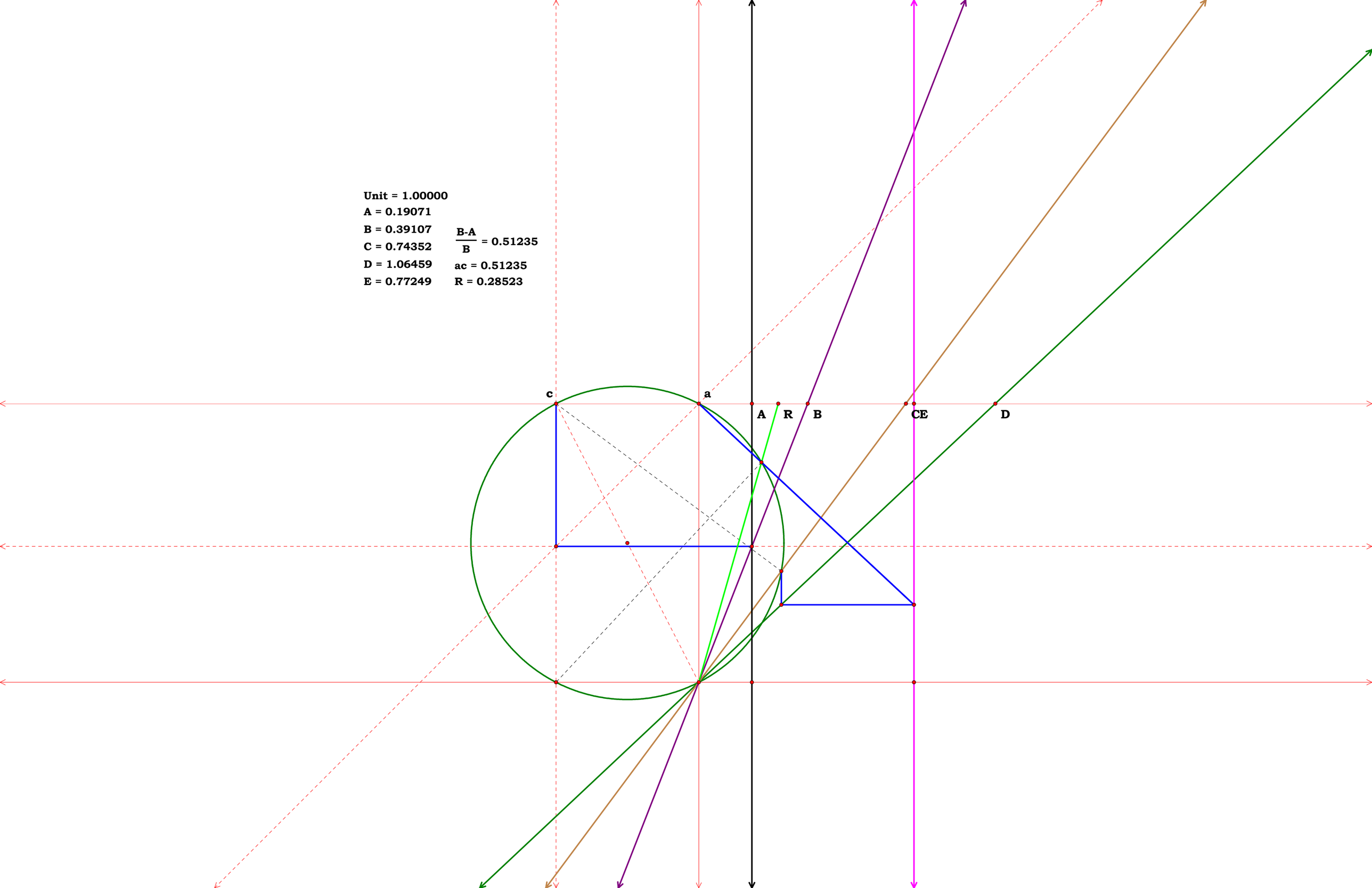
C = 0.59385 ac = 0.43258

D = 0.95596 R = 0.33679

E = 0.73145

$$\frac{((ac\cdot(C^2-D\cdot E\cdot(C^2+1))+C^2\cdot D)-C)+D}{ac^2\cdot C^2+ac\cdot((C^2\cdot D-C)+D)+D\cdot E\cdot(C^2+1)}-R = 0.00000$$

c a A R B C E D


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.74352
D = 1.06459
E = 0.77249
B-A / B = 0.51235
ac = 0.51235
R = 0.28523
c
a
A
R
B
CE
D

Unit = 1.00000

A = 0.31865

B = 0.17622

C = 1.36634

D = 0.70731

E = 0.57695

$\frac{A-B}{A} = 0.44697$

ac = 0.44697

R = 0.44898

$\frac{2 \cdot D \cdot E \cdot \sqrt{C^2}}{C \cdot \left(\sqrt{C^2+\sqrt{C^2-4 \cdot ac \cdot C \cdot D \cdot E-4 \cdot D^2 \cdot E^2}}\right)} - R = 0.00000$

c a B A R E D C

Unit = 1.00000

A = 0.45142

B = 0.11829

C = 1.63913

D = 0.66627

E = 0.58902

$\frac{B}{A}$ = 0.26203

ac = 0.26203

R = 0.27825

$$\frac{2\cdot D\cdot E\cdot\sqrt{C^2}}{C\cdot\left(\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}-R = 0.00000$$

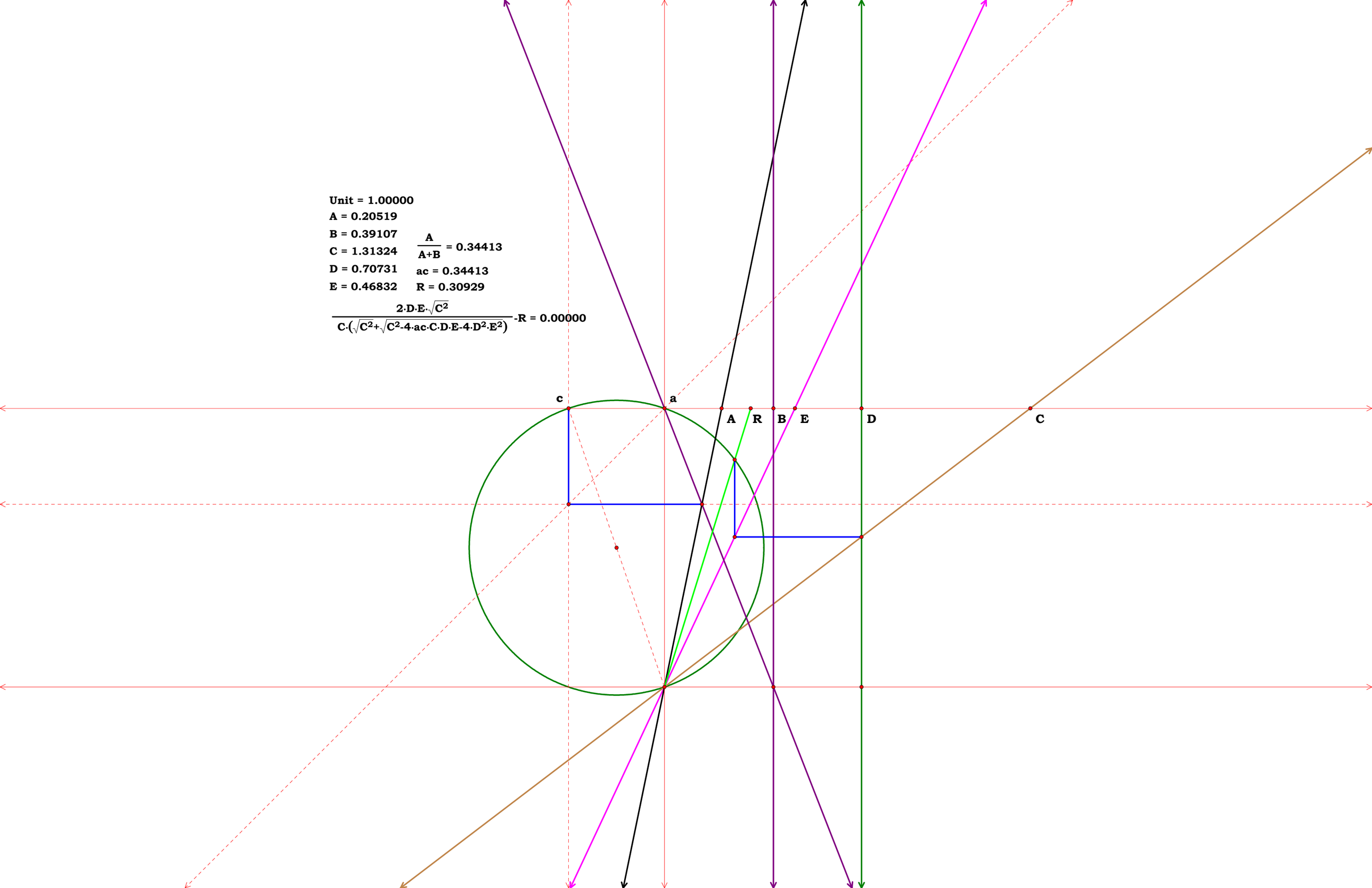
c a B R A E D C

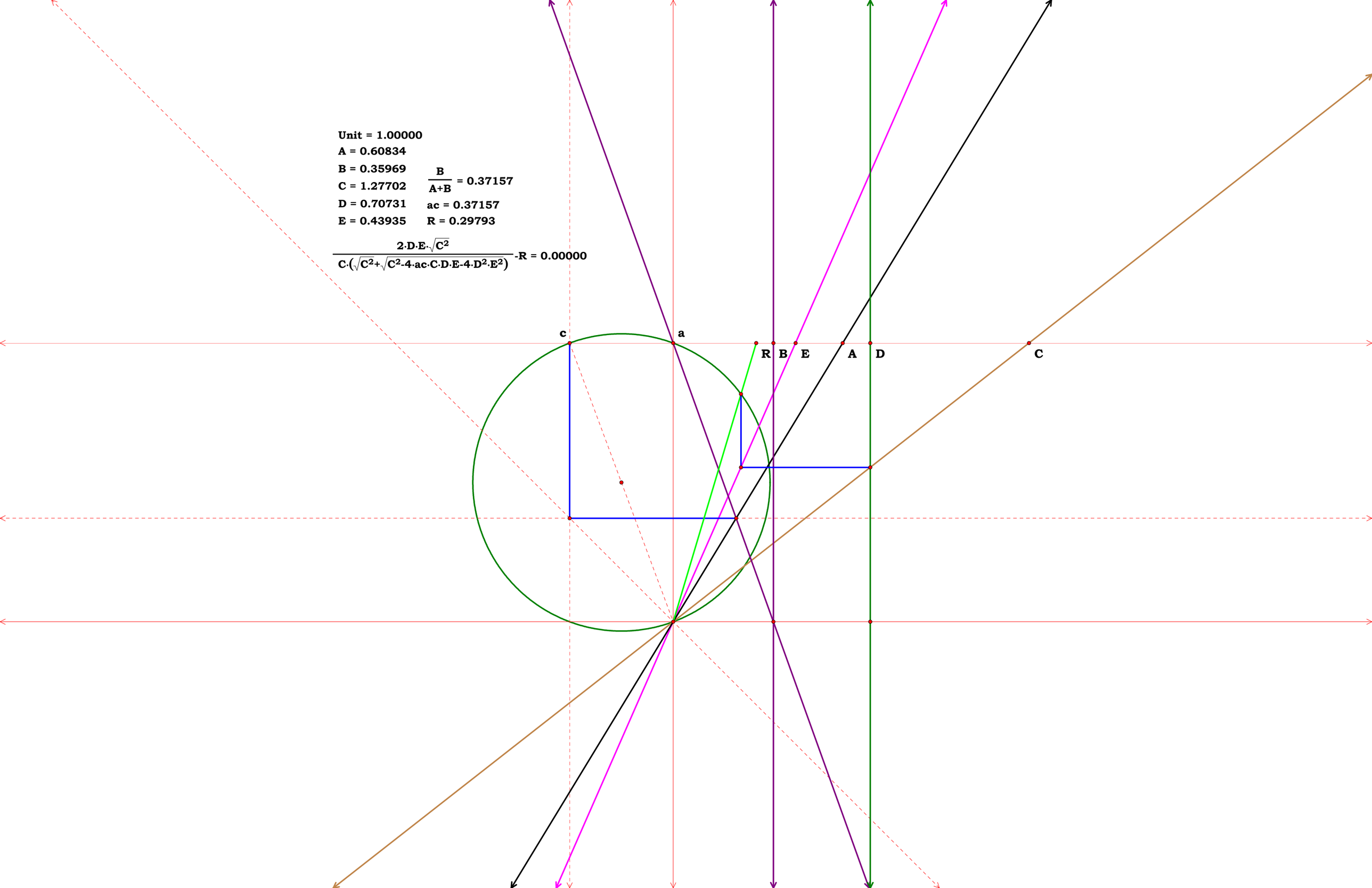
Unit = 1.00000
A = 0.20519
B = 0.39107
C = 1.31324
D = 0.70731
E = 0.46832

$\frac{A}{A+B} = 0.34413$

ac = 0.34413
R = 0.30929

$\frac{2 \cdot D \cdot E \cdot \sqrt{C^2}}{C \cdot \left(\sqrt{C^2}+\sqrt{C^2-4 \cdot ac \cdot C \cdot D \cdot E-4 \cdot D^2 \cdot E^2}\right)} - R = 0.00000$




Unit = 1.00000
A = 0.60834
B = 0.35969
C = 1.27702
D = 0.70731
E = 0.43935
B/(A+B) = 0.37157
ac = 0.37157
R = 0.29793
2·D·E·√C² / (C·(√C²+√C²-4·ac·C·D·E-4·D²·E²)) -R = 0.00000
c
a
R
B
E
A
D
C

Unit = 1.00000

A = 0.10622

B = 0.39107

C = 1.60775

D = 0.70731

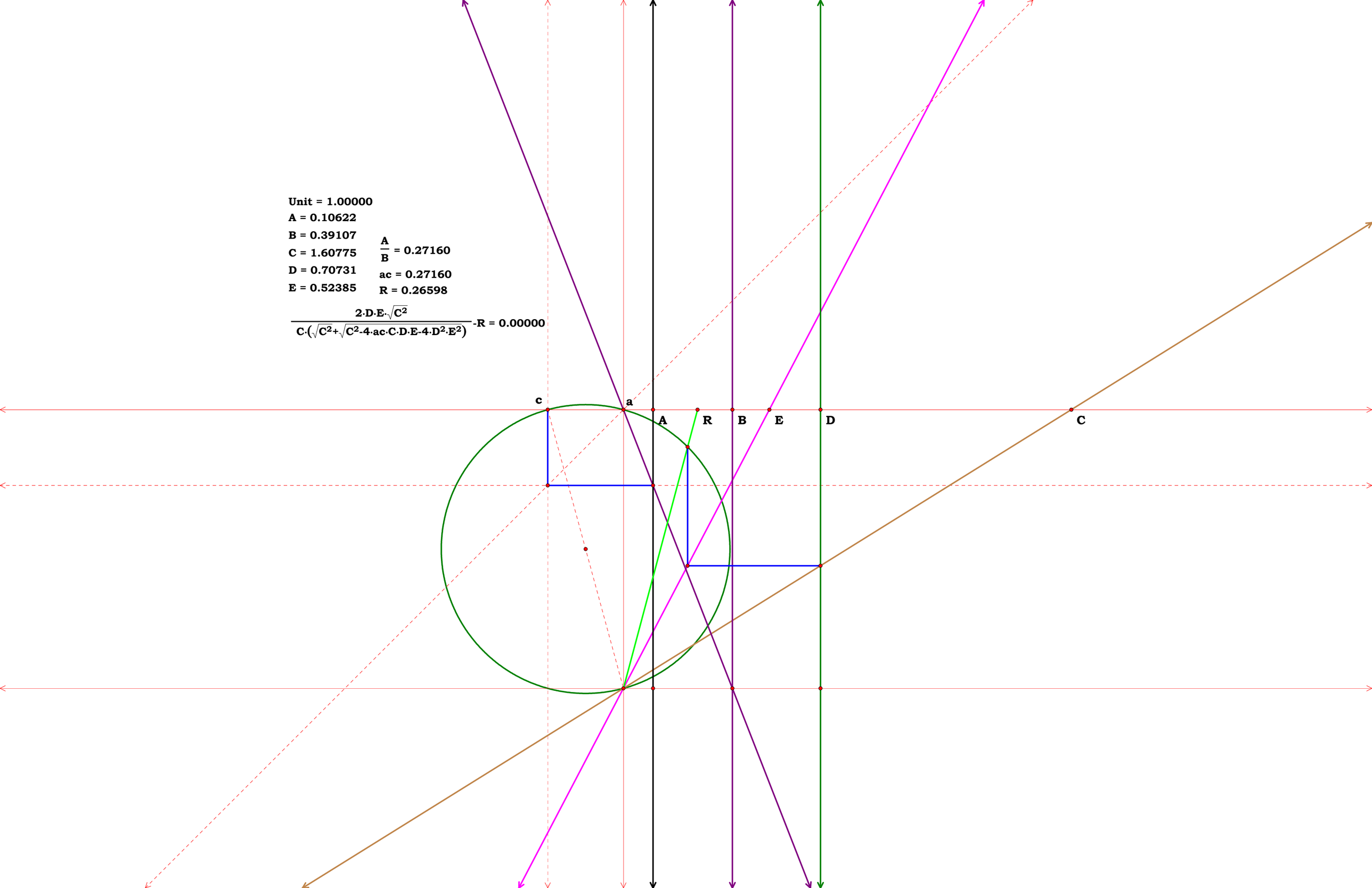
E = 0.52385

$\frac{A}{B} = 0.27160$

ac = 0.27160

R = 0.26598

$\frac{2 \cdot D \cdot E \cdot \sqrt{C^2}}{C \cdot \left(\sqrt{C^2} + \sqrt{C^2 - 4 \cdot ac \cdot C \cdot D \cdot E - 4 \cdot D^2 \cdot E^2}\right)} - R = 0.00000$



Unit = 1.00000

A = 0.19071

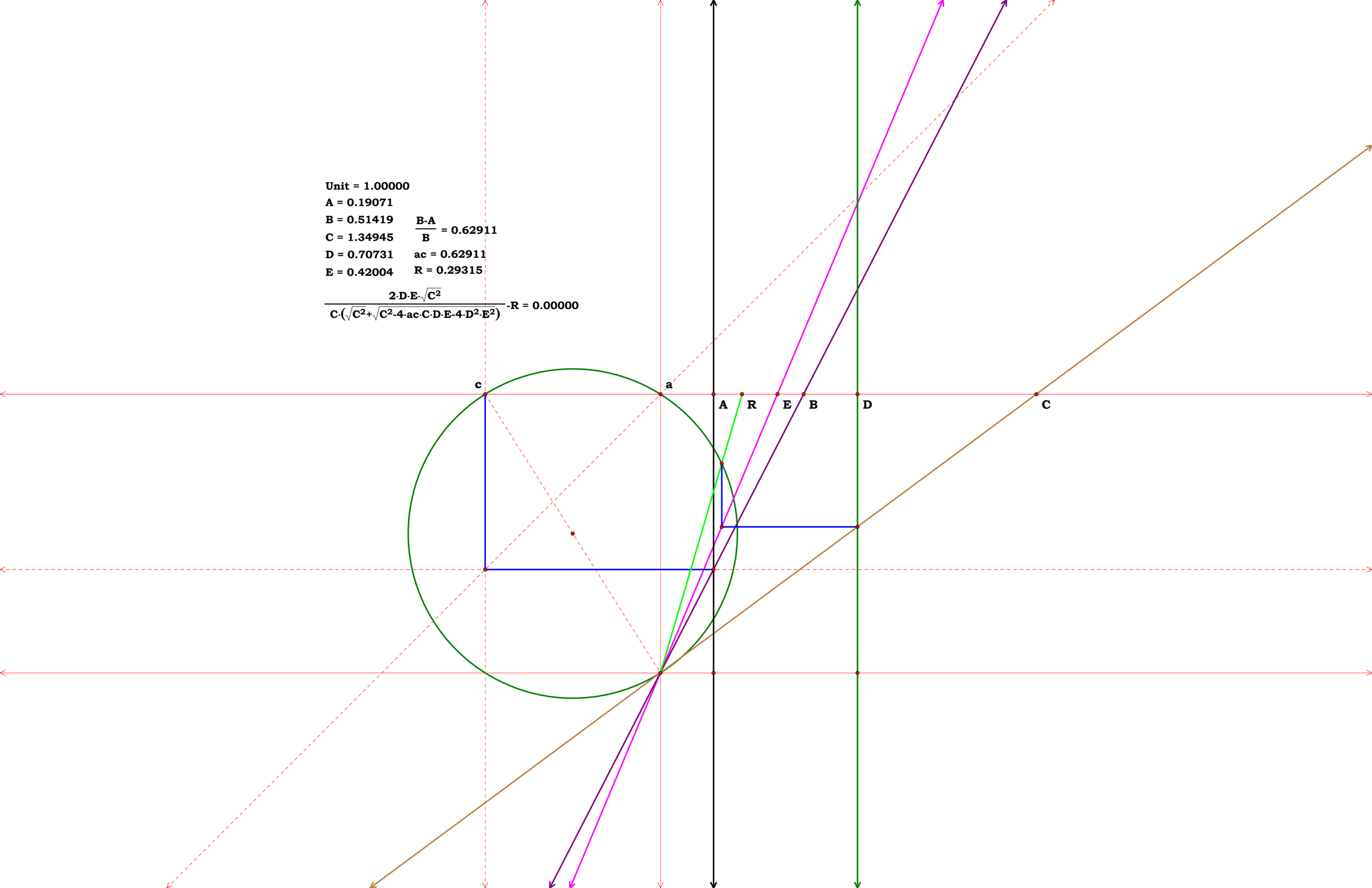
B = 0.51419 $\frac{B-A}{B}$ = 0.62911

C = 1.34945 ac = 0.62911

D = 0.70731 R = 0.29315

E = 0.42004

$$\frac{2\cdot D\cdot E\cdot\sqrt{C^2}}{C\cdot\left(\sqrt{C^2+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}\right)}-R = 0.00000$$



Unit = 1.00000

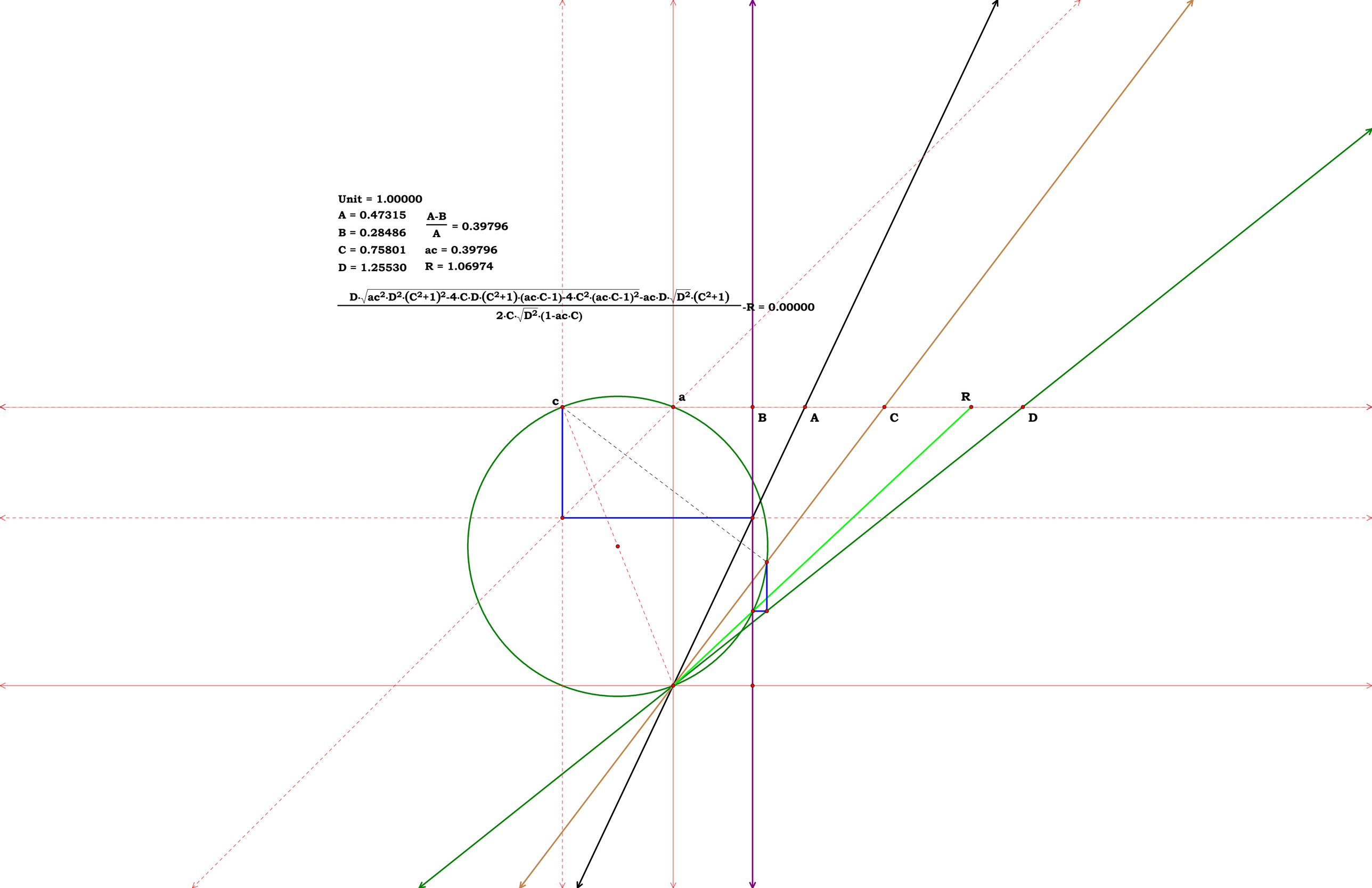
A = 0.47315 $\quad \frac{A-B}{A} = 0.39796$

B = 0.28486

C = 0.75801 $\quad ac = 0.39796$

D = 1.25530 $\quad R = 1.06974$

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2}\cdot(C^2+1)}{2\cdot C\cdot\sqrt{D^2}\cdot(1-ac\cdot C)}-R = 0.00000$$



Unit = 1.00000

A = 0.32831

B = 0.19071

C = 0.96561

D = 0.60351

$\frac{B}{A}$ = 0.58088

ac = 0.58088

R = 0.74669

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2\cdot(C^2+1)}}{2\cdot C\cdot\sqrt{D^2\cdot(1-ac\cdot C)}}-R = 0.00000$$

c

a

B

A

D

R

C

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.68800

D = 1.29151

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 1.12165

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2}\cdot(C^2+1)}{2\cdot C\cdot\sqrt{D^2}\cdot(1-ac\cdot C)}-R = 0.00000$$

c a A B C R D

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.54799
D = 1.40738

$\frac{B}{A+B} = 0.63529$

ac = 0.63529
R = 0.97483

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2\cdot(C^2+1)}}{2\cdot C\cdot\sqrt{D^2}\cdot(1-ac\cdot C)}-R = 0.00000$$

c
a
A
B
C
R
D

Unit = 1.00000

A = 0.19071

B = 0.39107

$\frac{A}{B}$ = 0.48765

C = 0.76042

ac = 0.48765

D = 1.51601

R = 1.12324

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2\cdot(C^2+1)}}{2\cdot C\cdot\sqrt{D^2}\cdot(1-ac\cdot C)}-R = 0.00000$$

c

a

A

B

C

R

D

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 1.26978

D = 0.70731

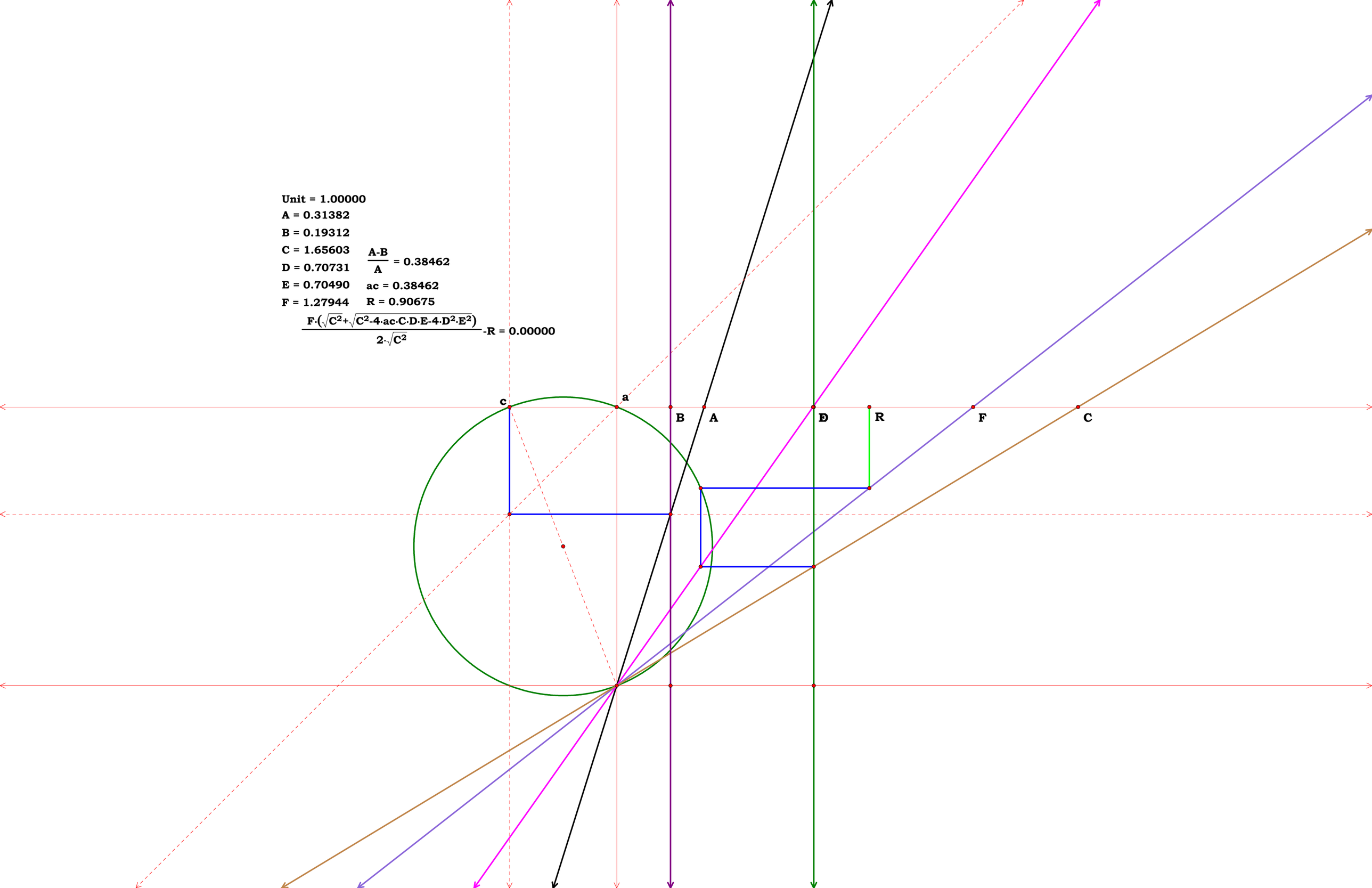
$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 1.00743

$$\frac{D\cdot\sqrt{ac^2\cdot D^2\cdot(C^2+1)^2-4\cdot C\cdot D\cdot(C^2+1)\cdot(ac\cdot C-1)-4\cdot C^2\cdot(ac\cdot C-1)^2}-ac\cdot D\cdot\sqrt{D^2}\cdot(C^2+1)}{2\cdot C\cdot\sqrt{D^2}\cdot(1-ac\cdot C)} - R = 0.00000$$

c a A B D R C


Unit = 1.00000
A = 0.31382
B = 0.19312
C = 1.65603
D = 0.70731
E = 0.70490
F = 1.27944
$\frac{A-B}{A} = 0.38462$
ac = 0.38462
R = 0.90675
$\frac{F\cdot\left(\sqrt{C^2+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}\right)}{2\cdot\sqrt{C^2}} - R = 0.00000$
c
a
B
A
D
R
F
C

Unit = 1.00000
A = 0.40797
B = 0.17381
C = 1.50636
D = 0.70731
E = 0.54799
F = 1.08149

$\frac{B}{A} = 0.42604$

ac = 0.42604

R = 0.83528

$\frac{F\cdot\left(\sqrt{C^2+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}\right)}{2\cdot\sqrt{C^2}}-R = 0.00000$

c a B A E D R F C

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.73569
D = 0.63248
E = 0.77732
F = 1.40255

$\frac{A}{A+B} = 0.32780$

ac = 0.32780
R = 1.09026

$\frac{F\cdot\left(\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot\sqrt{C^2}} - R = 0.00000$

c
a
A
B
D
E
R
F
C

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 1.61740
D = 0.62041
E = 0.51902
F = 1.08149

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 0.85398

$\frac{F\cdot\left(\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot\sqrt{C^2}} - R = 0.00000$

c a A B E D R F C

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 1.55222

D = 0.70731

E = 0.56730

F = 1.19495

$\frac{A}{B} = 0.48765$

ac = 0.48765

R = 0.88305

$\frac{F\cdot\left(\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot\sqrt{C^2}}-R = 0.00000$

c

a

A

B

E

D

R

F

C

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 1.70190 $\quad \frac{B-A}{B} = 0.51235$

D = 0.70731

E = 0.58661 $\quad ac = 0.51235$

F = 1.28668 $\quad R = 0.97303$

$$\frac{F\cdot\left(\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot\sqrt{C^2}}-R = 0.00000$$

c a A B E D R F C

Unit = 1.00000
A = 0.31382
B = 0.19312
C = 1.22633
D = 0.63248
E = 0.58178
F = 1.08149

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 1.52087

$\frac{2 \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2+\sqrt{C^2-4 \cdot ac \cdot C \cdot D \cdot E-4 \cdot D^2 \cdot E^2}}} - R = 0.00000$

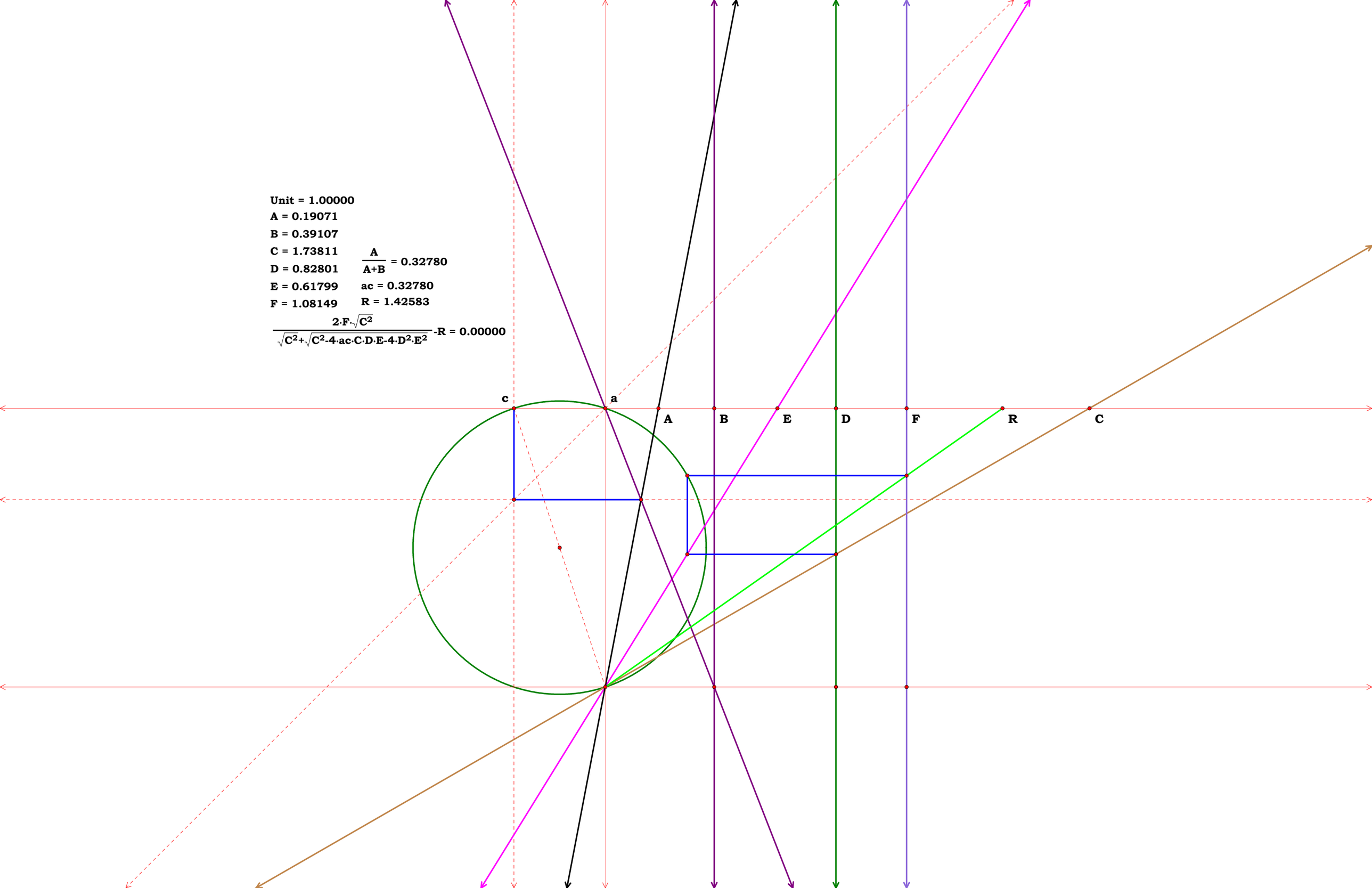
c a B A E D F C R

Unit = 1.00000
A = 0.34038
B = 0.14967
C = 1.73086
D = 0.70731
E = 0.57213
F = 1.08149

$\frac{B}{A}$ = 0.43972
ac = 0.43972
R = 1.34481

$$\frac{2\cdot F\cdot\sqrt{C^2}}{\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}-R = 0.00000$$

c
a
B
A
E
D
F
R
C


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.73811
D = 0.82801
E = 0.61799
F = 1.08149
A/(A+B) = 0.32780
ac = 0.32780
R = 1.42583
2·F·√C² / √(C²+√(C²-4·ac·C·D·E-4·D²·E²)) -R = 0.00000
c
a
A
B
E
D
F
R
C

Unit = 1.00000
A = 0.22451
B = 0.31141
C = 1.68017
D = 0.70731
E = 0.50936
F = 1.08149

$\frac{B}{A+B}$ = 0.58108
ac = 0.58108
R = 1.38331

c
a
A
B
E
D
F
R
C

Unit = 1.00000

A = 0.19071

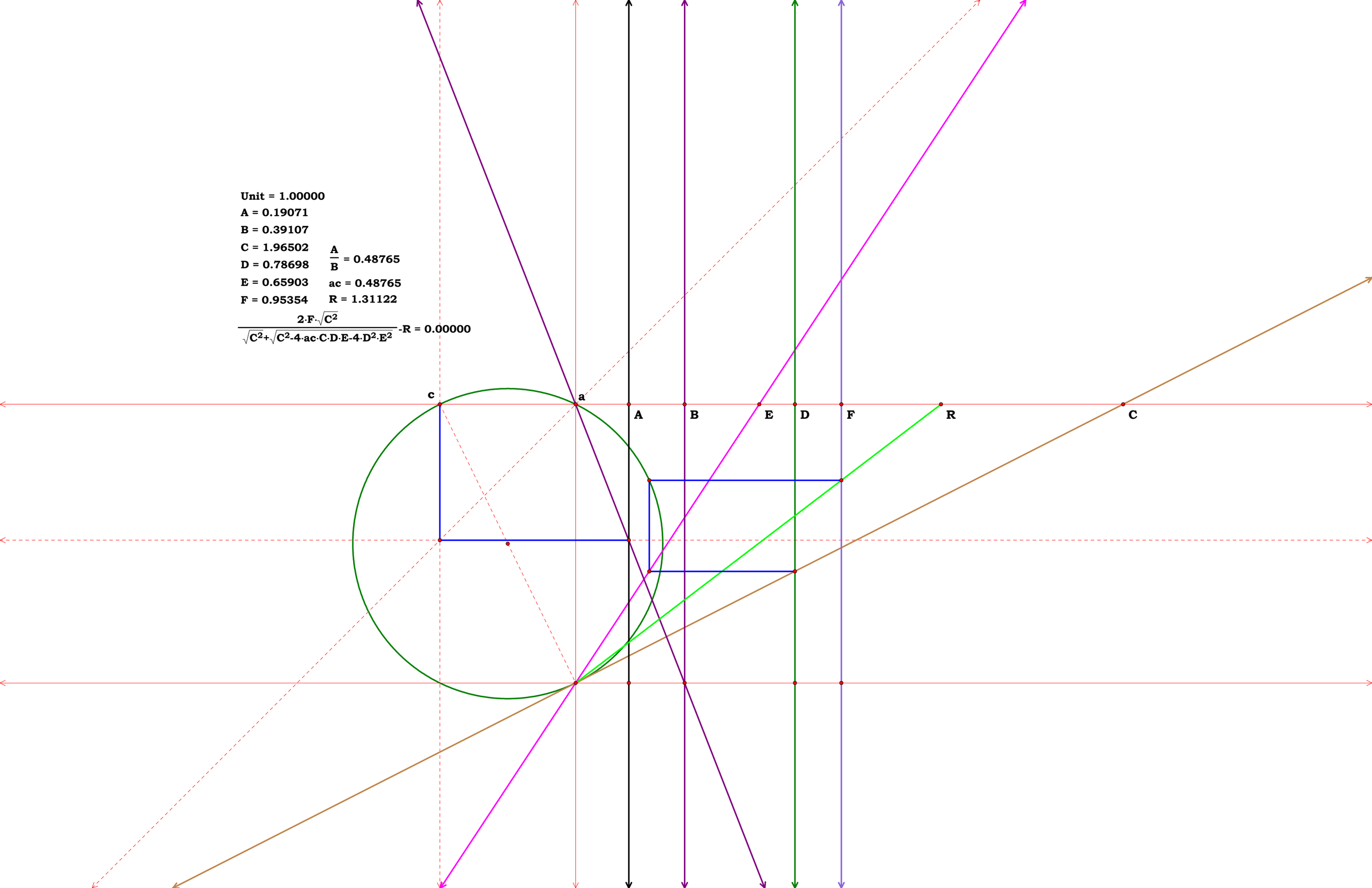
B = 0.39107

C = 1.96502 $\frac{A}{B}$ = 0.48765

D = 0.78698 ac = 0.48765

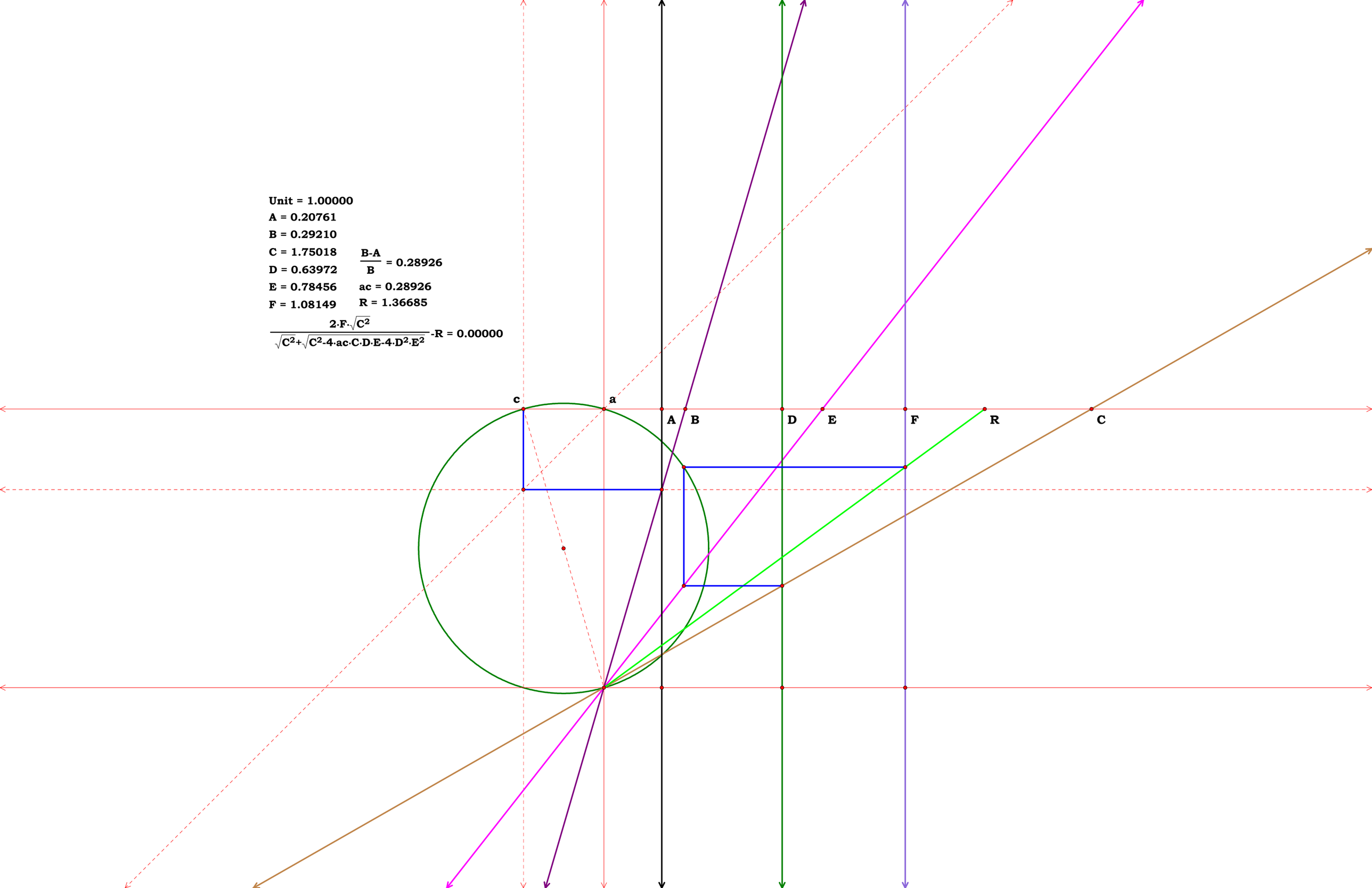
E = 0.65903 R = 1.31122

F = 0.95354 $\frac{2 \cdot F \cdot \sqrt{C^2}}{\sqrt{C^2+\sqrt{C^2-4 \cdot ac \cdot C \cdot D \cdot E-4 \cdot D^2 \cdot E^2}}}$-R = 0.00000



Unit = 1.00000
A = 0.20761
B = 0.29210
C = 1.75018 $\frac{B-A}{B}$ = 0.28926
D = 0.63972 ac = 0.28926
E = 0.78456 R = 1.36685
F = 1.08149

$$\frac{2\cdot F\cdot\sqrt{C^2}}{\sqrt{C^2}+\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}-R = 0.00000$$



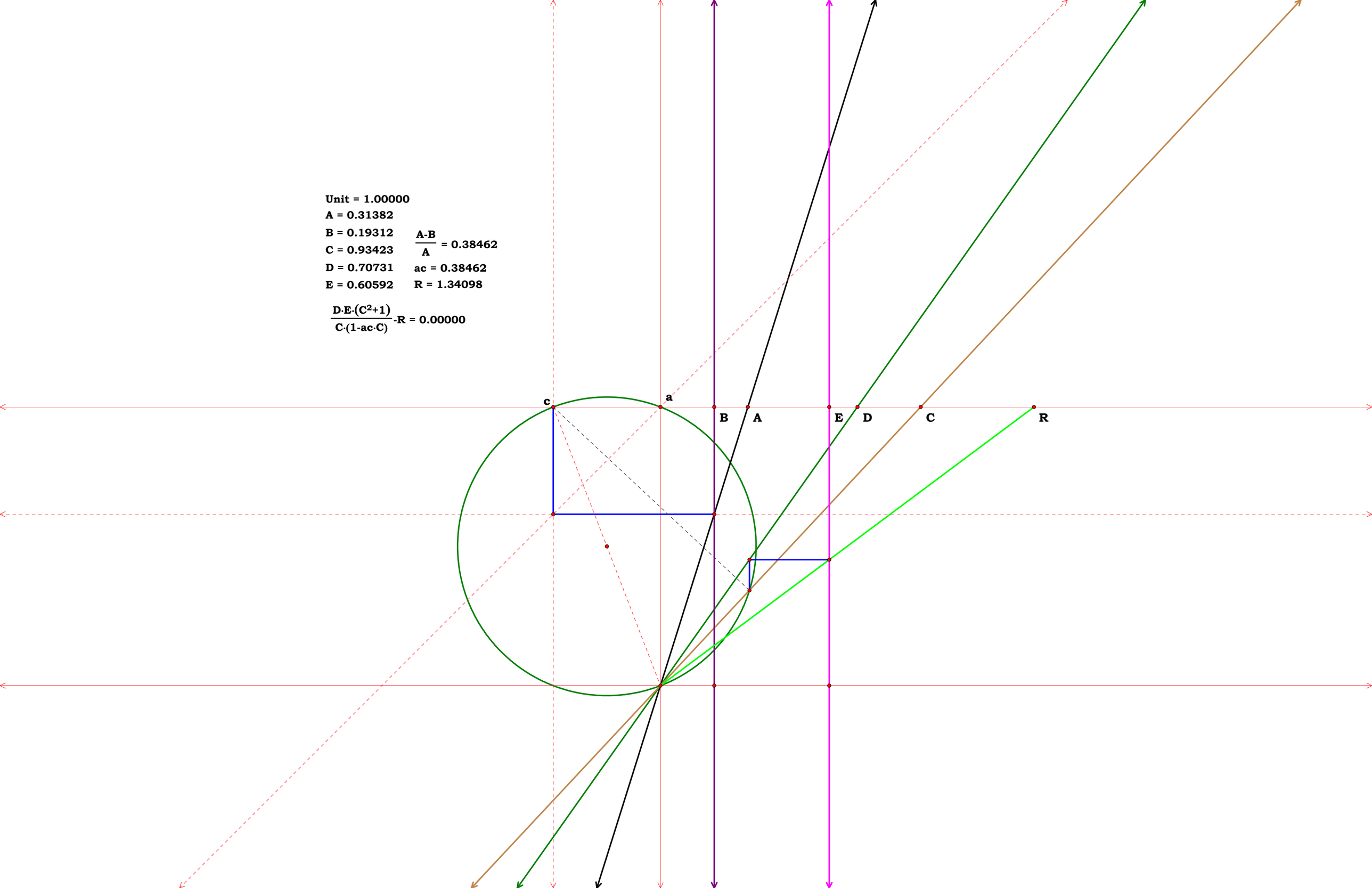
Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.93423
D = 0.70731
E = 0.60592

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 1.34098

$\frac{D \cdot E \cdot (C^2+1)}{C \cdot (1-ac \cdot C)} - R = 0.00000$

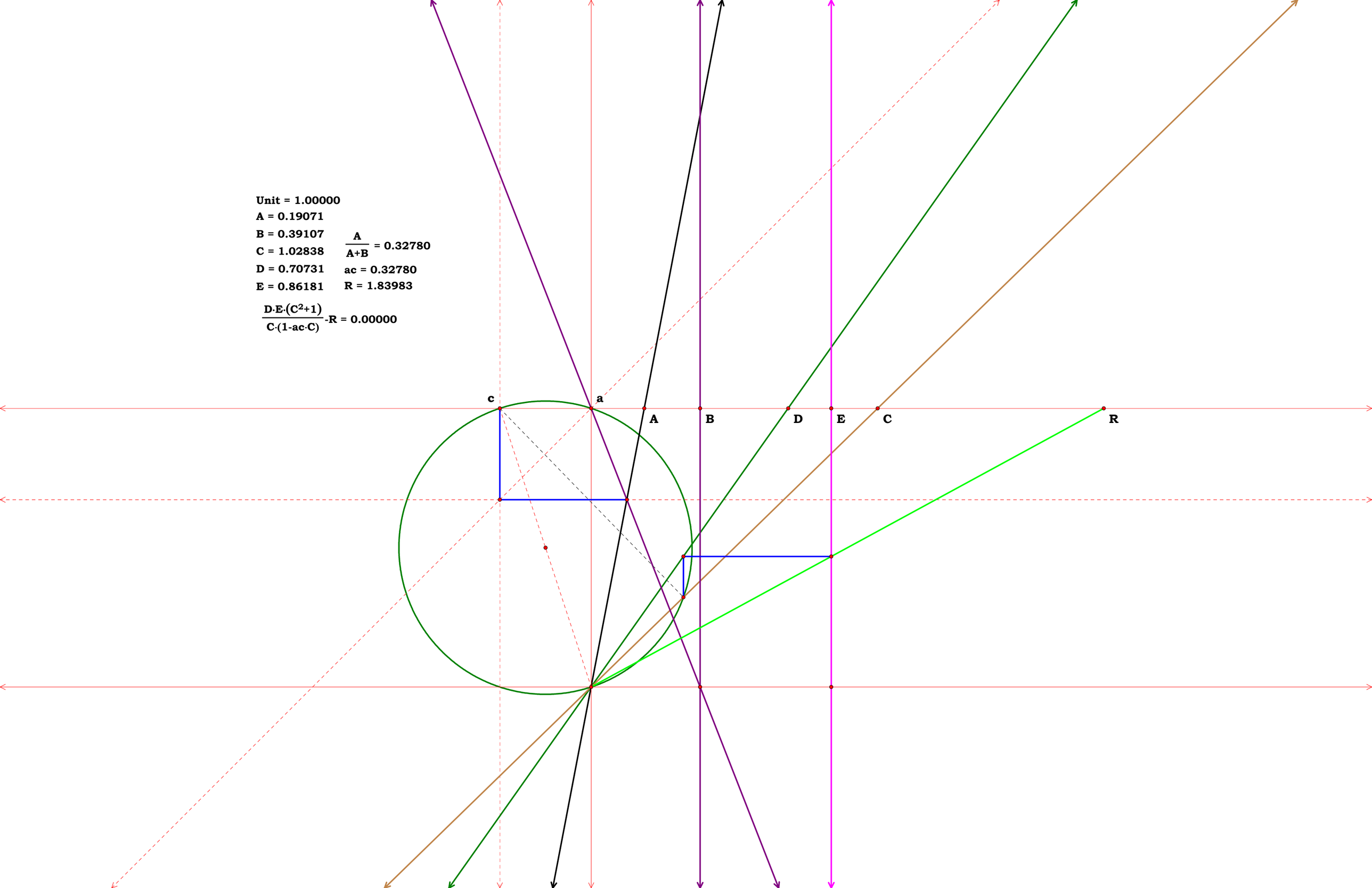


Unit = 1.00000
A = 0.26072
B = 0.13760
C = 1.10321
D = 0.54799
E = 0.69524

$\frac{B}{A}$ = 0.52778
ac = 0.52778
R = 1.83279

$\frac{D \cdot E \cdot (C^2+1)}{C \cdot (1-ac \cdot C)}$ - R = 0.00000

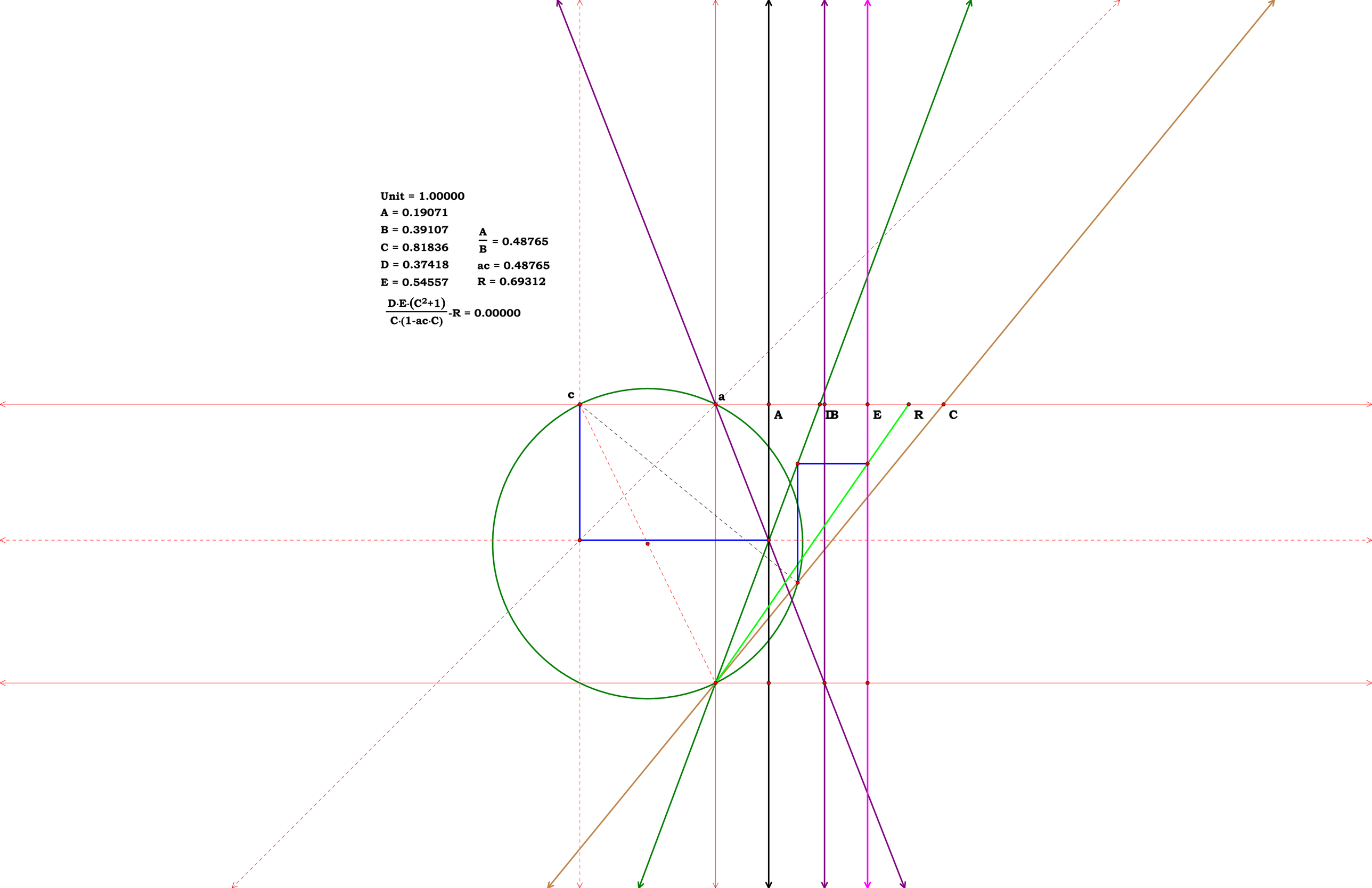
c
a
B
A
D
E
C
R

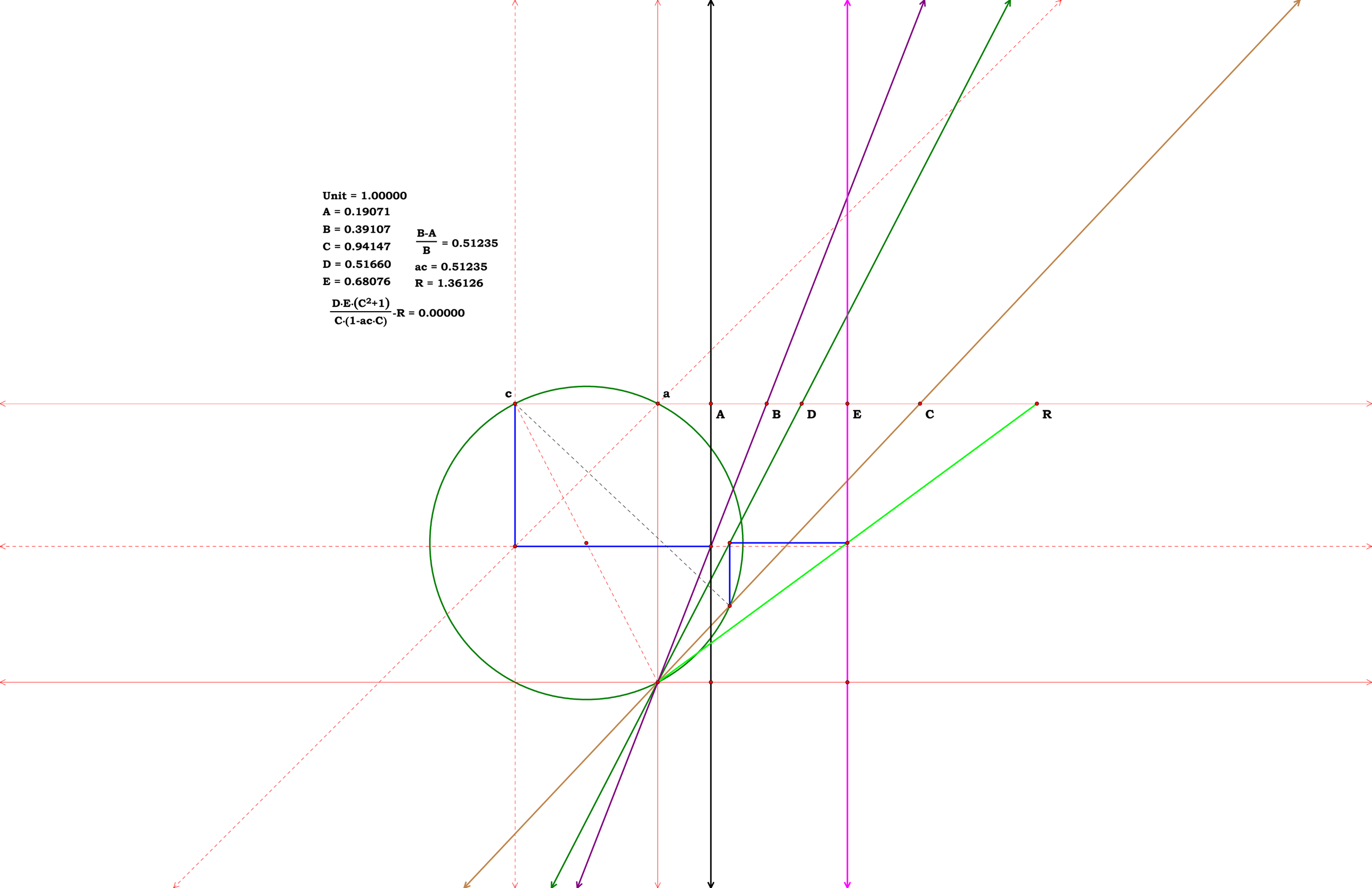

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.02838
D = 0.70731
E = 0.86181
A/(A+B) = 0.32780
ac = 0.32780
R = 1.83983
D·E·(C²+1)/(C·(1-ac·C)) - R = 0.00000
c
a
A
B
D
E
C
R

Unit = 1.00000
A = 0.22451
B = 0.39107 $\frac{B}{A+B}$ = 0.63529
C = 0.97768 ac = 0.63529
D = 0.47557 R = 1.60633
E = 0.63972

$\frac{D \cdot E \cdot (C^2+1)}{C \cdot (1-ac \cdot C)}$ -R = 0.00000

c a A B D E C R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.81836
D = 0.37418
E = 0.54557
A/B = 0.48765
ac = 0.48765
R = 0.69312
D·E·(C²+1) / C·(1-ac·C) -R = 0.00000
c
a
A
D
B
E
R
C


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.94147
D = 0.51660
E = 0.68076
(B-A)/B = 0.51235
ac = 0.51235
R = 1.36126
D·E·(C²+1)/(C·(1-ac·C)) -R = 0.00000
c
a
A
B
D
E
C
R

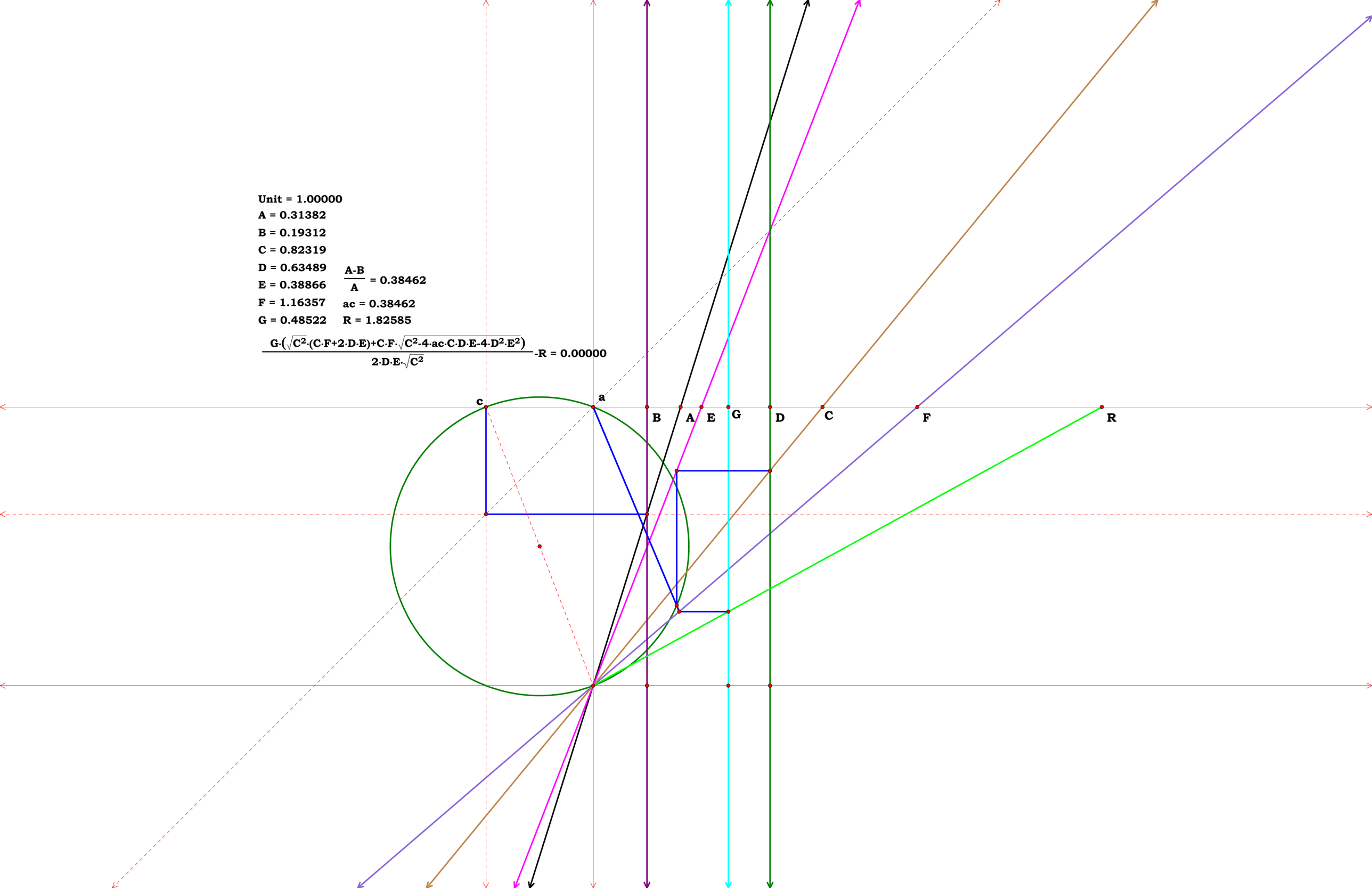
Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.82319
D = 0.63489
E = 0.38866
F = 1.16357
G = 0.48522

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 1.82585

$$\frac{G\cdot\left(\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}}-R = 0.00000$$



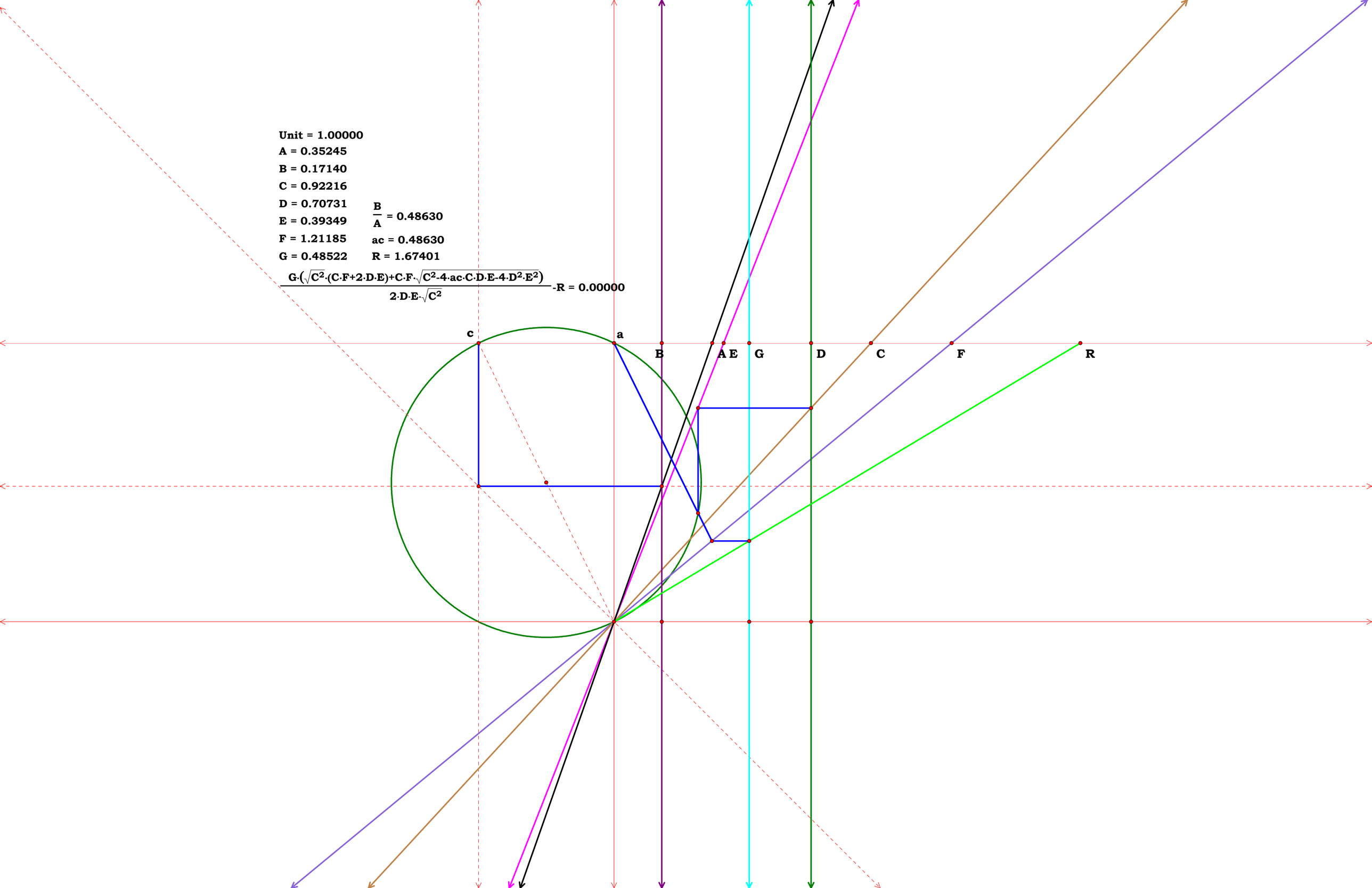
Unit = 1.00000
A = 0.35245
B = 0.17140
C = 0.92216
D = 0.70731
E = 0.39349
F = 1.21185
G = 0.48522

$\frac{B}{A} = 0.48630$

ac = 0.48630

R = 1.67401

$$\frac{G\cdot\left(\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}}-R = 0.00000$$



Unit = 1.00000
A = 0.22451
B = 0.57454
C = 0.91975
D = 0.70731
E = 0.44901
F = 1.47980
G = 0.50212

$\frac{A}{A+B} = 0.28097$

ac = 0.28097

R = 1.97335

$\frac{G\cdot\left(\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}} - R = 0.00000$

c a A E G B D C F R

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.91975
D = 0.70731
E = 0.31865
F = 1.47980
G = 0.52143

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 2.67871

$\frac{G\cdot\left(\sqrt{C^2\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}} - R = 0.00000$

c a A E B G D C F R

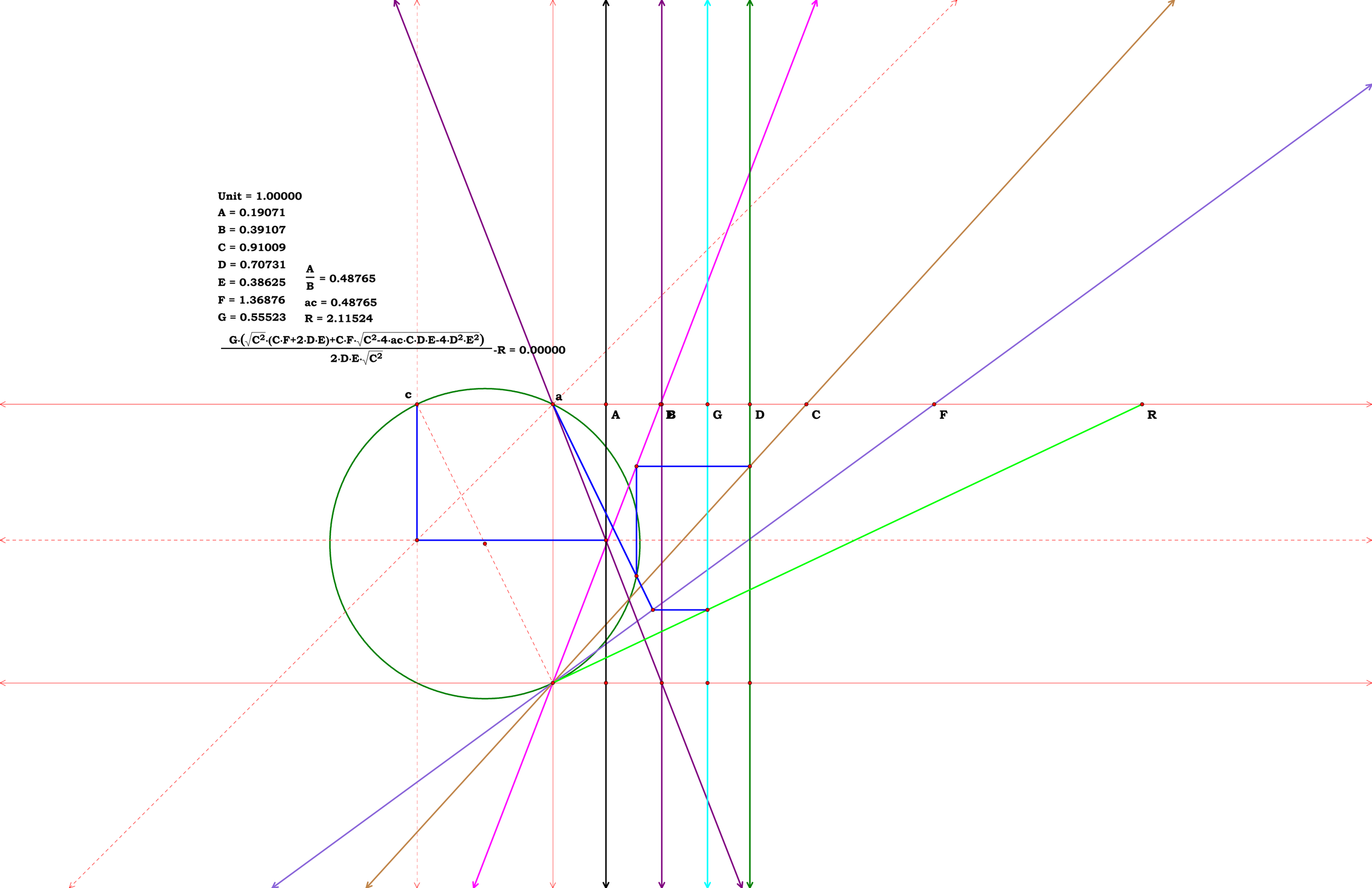
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.91009
D = 0.70731
E = 0.38625
F = 1.36876
G = 0.55523

$\frac{A}{B} = 0.48765$

ac = 0.48765

R = 2.11524

$$\frac{G\cdot\left(\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}}-R = 0.00000$$



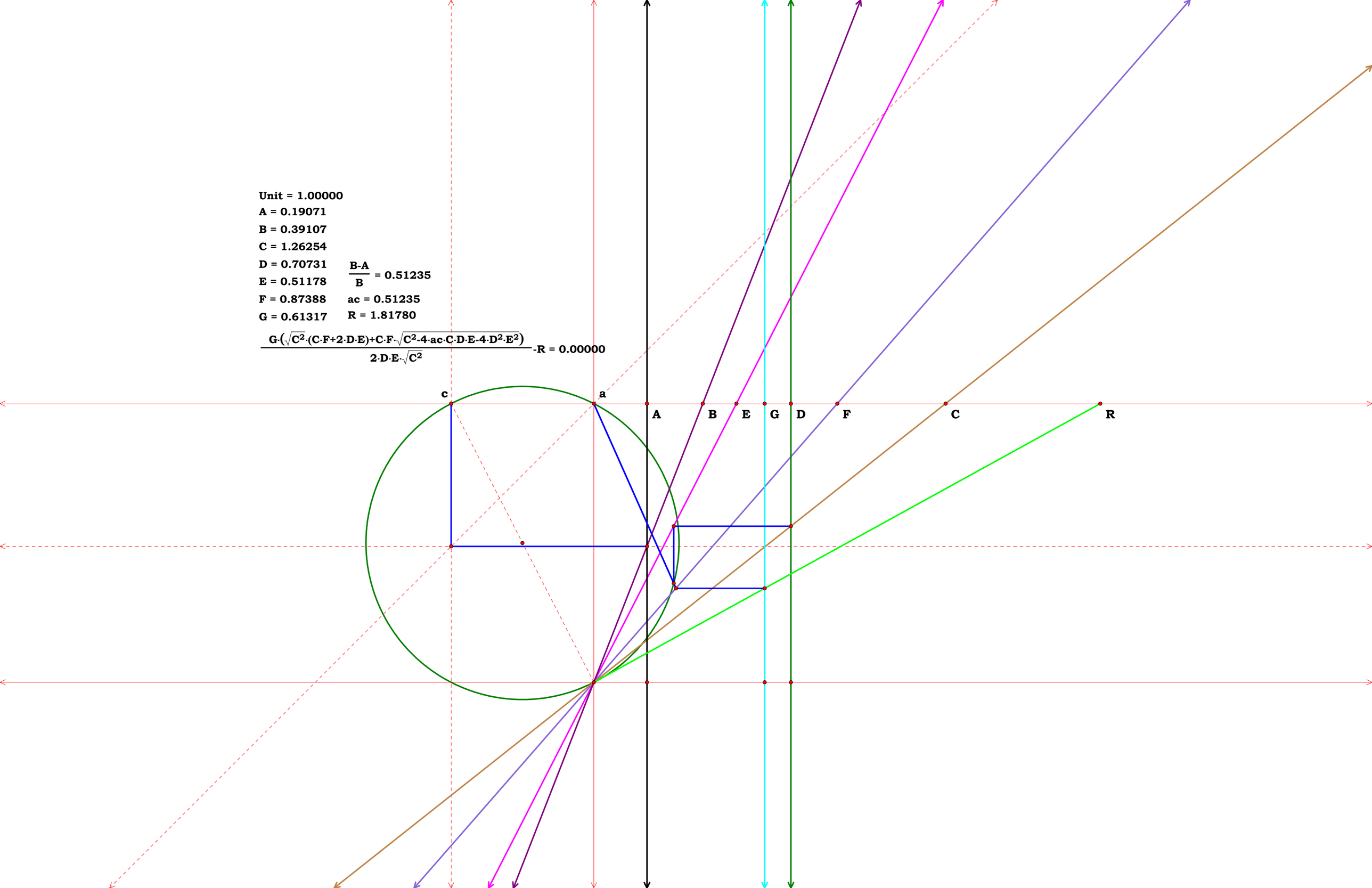
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.26254
D = 0.70731
E = 0.51178
F = 0.87388
G = 0.61317

$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 1.81780

$\frac{G\cdot\left(\sqrt{C^2}\cdot(C\cdot F+2\cdot D\cdot E)+C\cdot F\cdot\sqrt{C^2-4\cdot ac\cdot C\cdot D\cdot E-4\cdot D^2\cdot E^2}\right)}{2\cdot D\cdot E\cdot\sqrt{C^2}}-R = 0.00000$



Unit = 1.00000

A = 0.19071

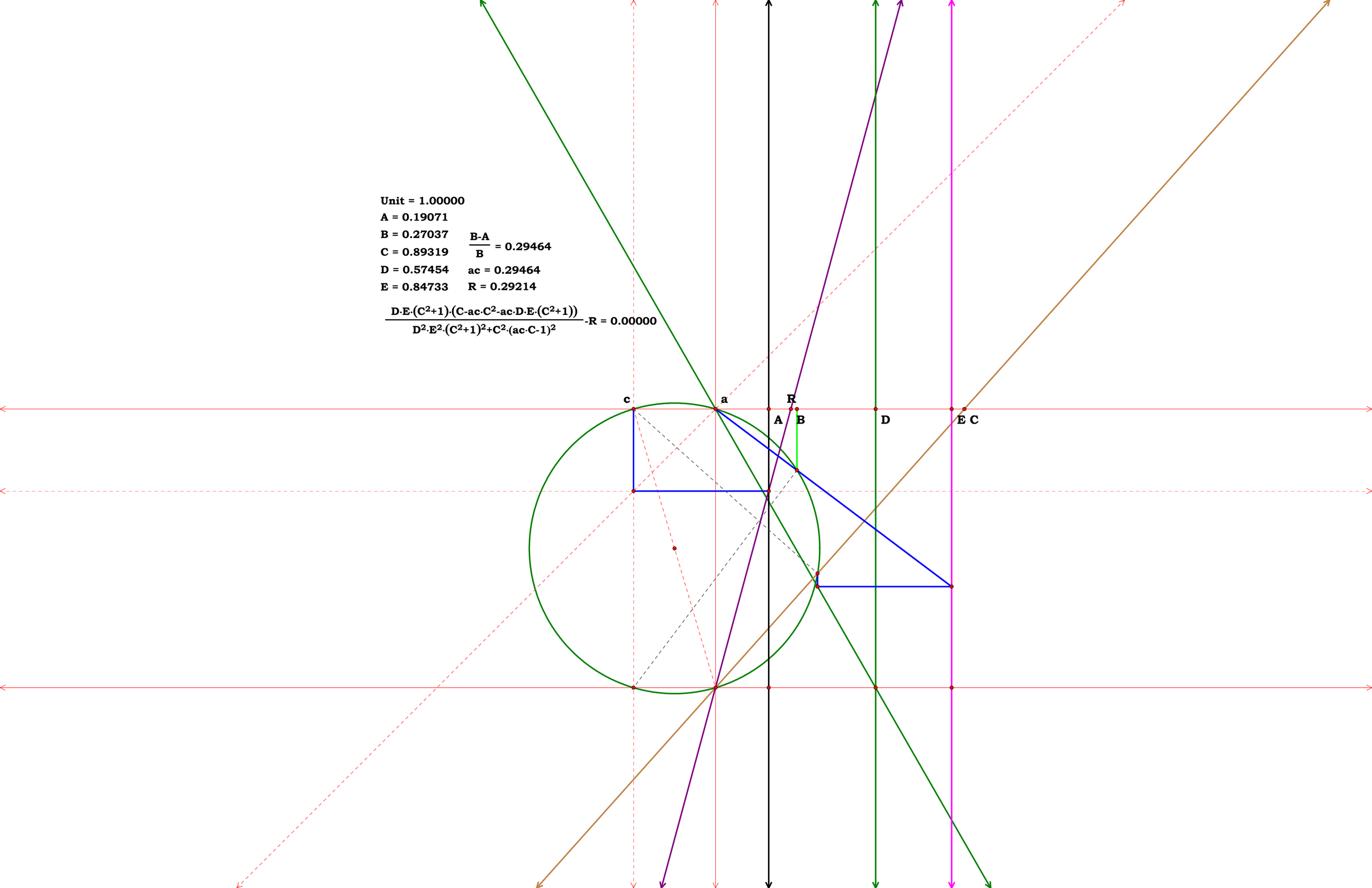
B = 0.27037 $\frac{B-A}{B}$ = 0.29464

C = 0.89319 ac = 0.29464

D = 0.57454 R = 0.29214

E = 0.84733

$$\frac{D\cdot E\cdot(C^2+1)\cdot(C-ac\cdot C^2-ac\cdot D\cdot E\cdot(C^2+1))}{D^2\cdot E^2\cdot(C^2+1)^2+C^2\cdot(ac\cdot C-1)^2}-R = 0.00000$$



Unit = 1.00000

A = 0.51419

B = 0.14726

C = 1.03562

D = 0.47074

E = 0.86181

$\frac{B}{A}$ = 0.28638

ac = 0.28638

R = 0.33132

$\frac{D\cdot E\cdot(C^2+1)\cdot(C-ac\cdot C^2-ac\cdot D\cdot E\cdot(C^2+1))}{D^2\cdot E^2\cdot(C^2+1)^2+C^2\cdot(ac\cdot C-1)^2}$ -R = 0.00000

c

a

B

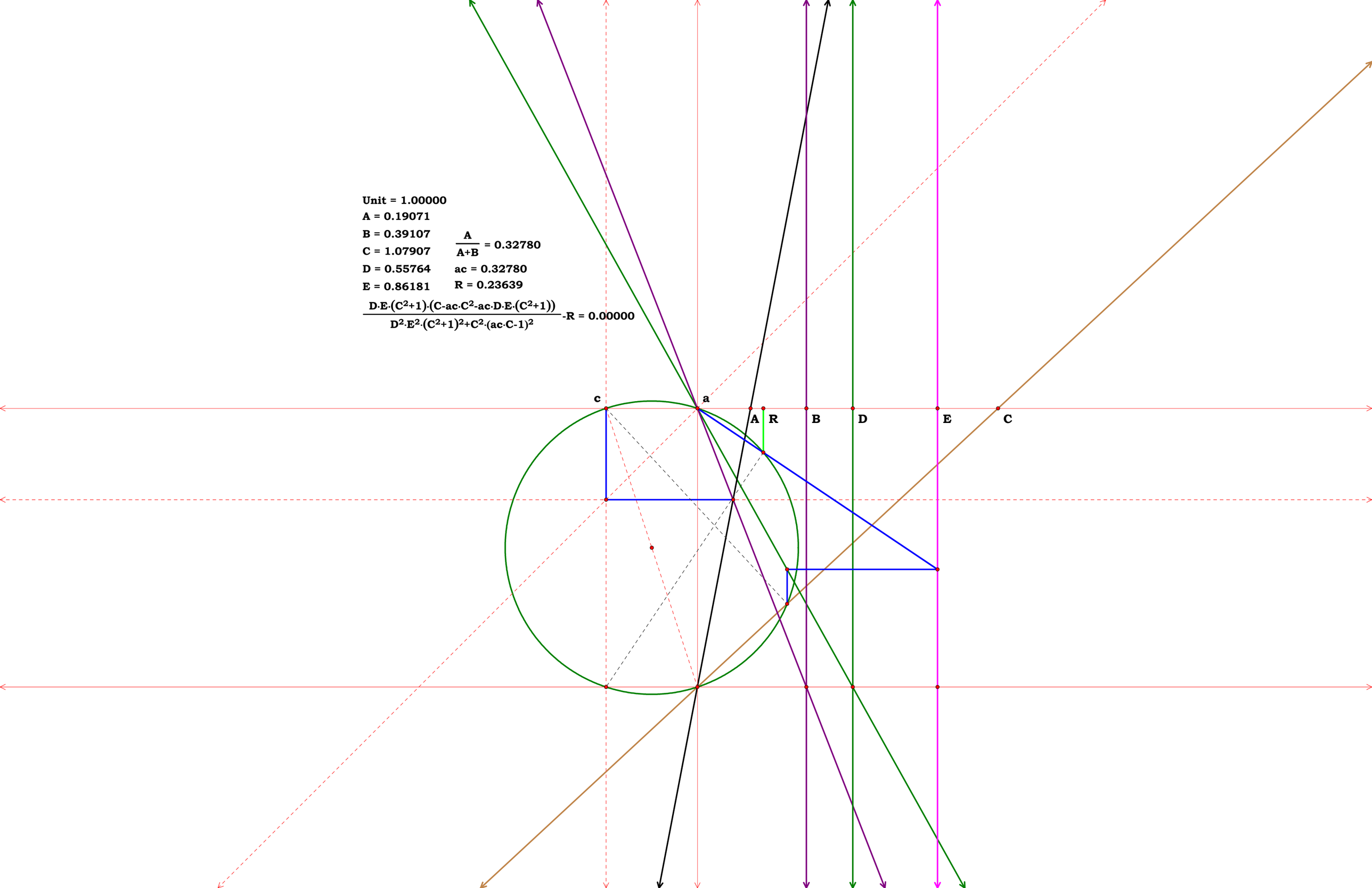
R

D

A

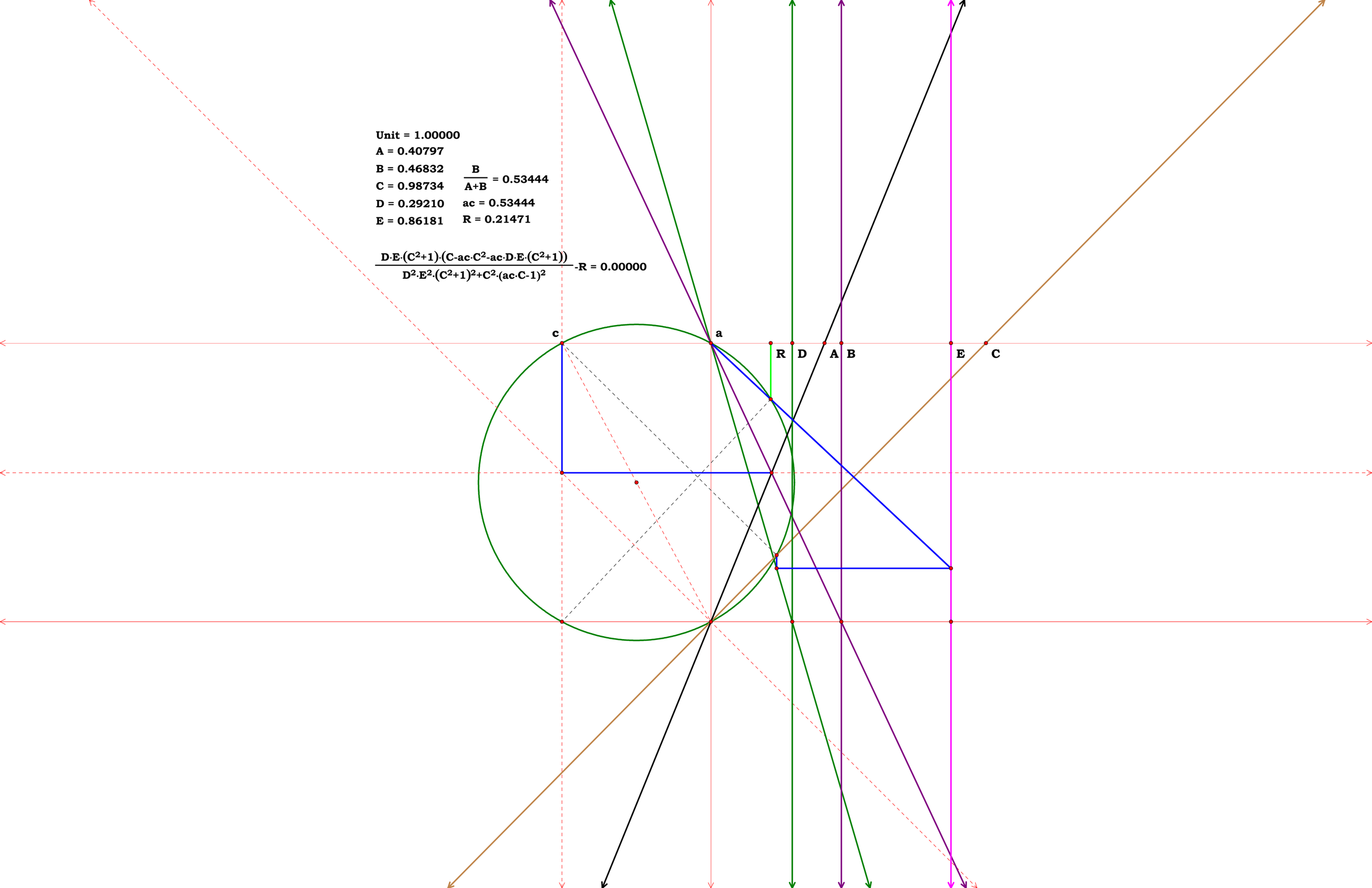
E

C


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.07907
D = 0.55764
E = 0.86181
A/(A+B) = 0.32780
ac = 0.32780
R = 0.23639
(D·E·(C²+1)·(C-ac·C²-ac·D·E·(C²+1)))/(D²·E²·(C²+1)²+C²·(ac·C-1)²)-R = 0.00000
c
a
A
R
B
D
E
C

Unit = 1.00000
A = 0.40797
B = 0.46832 $\frac{B}{A+B}$ = 0.53444
C = 0.98734 ac = 0.53444
D = 0.29210 R = 0.21471
E = 0.86181

$$\frac{D\cdot E\cdot(C^2+1)\cdot(C-ac\cdot C^2-ac\cdot D\cdot E\cdot(C^2+1))}{D^2\cdot E^2\cdot(C^2+1)^2+C^2\cdot(ac\cdot C-1)^2}-R = 0.00000$$



Unit = 1.00000

A = 0.18588

B = 0.38866

C = 0.82560

D = 0.35004

E = 0.86181

$\frac{A}{B}$ = 0.47826

ac = 0.47826

R = 0.25717

$\frac{D \cdot E \cdot (C^2+1) \cdot (C - ac \cdot C^2 - ac \cdot D \cdot E \cdot (C^2+1))}{D^2 \cdot E^2 \cdot (C^2+1)^2 + C^2 \cdot (ac \cdot C - 1)^2} - R = 0.00000$

c

a

A

R

D

B

C

E

Unit = 1.00000

A = 0.27279

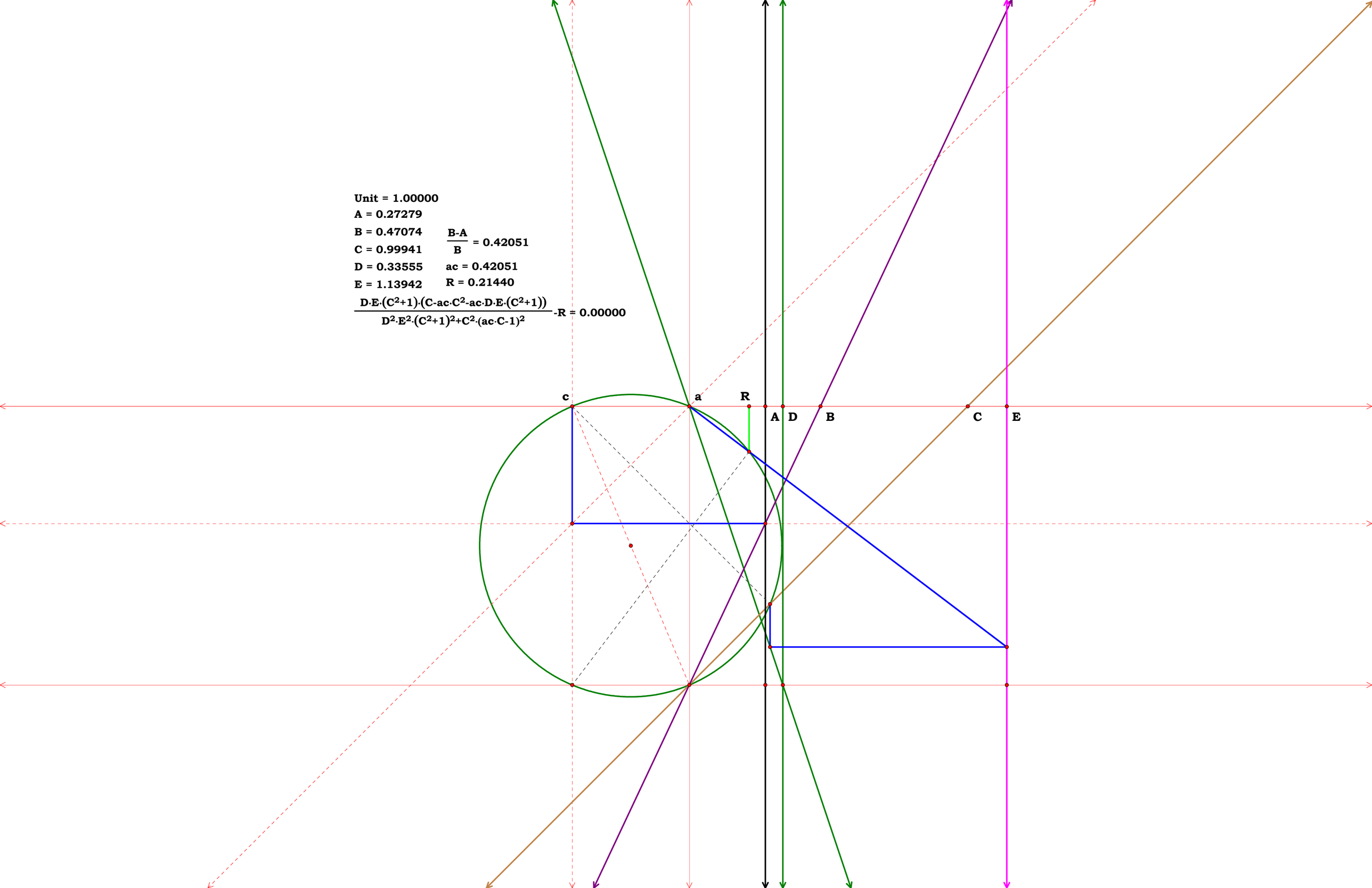
B = 0.47074 $\quad \frac{B-A}{B} = 0.42051$

C = 0.99941

D = 0.33555 $\quad ac = 0.42051$

E = 1.13942 $\quad R = 0.21440$

$$\frac{D\cdot E\cdot(C^2+1)\cdot(C-ac\cdot C^2-ac\cdot D\cdot E\cdot(C^2+1))}{D^2\cdot E^2\cdot(C^2+1)^2+C^2\cdot(ac\cdot C-1)^2}-R = 0.00000$$



Unit = 1.00000

A = 0.38383

B = 0.28968

C = 1.06218

D = 0.32831

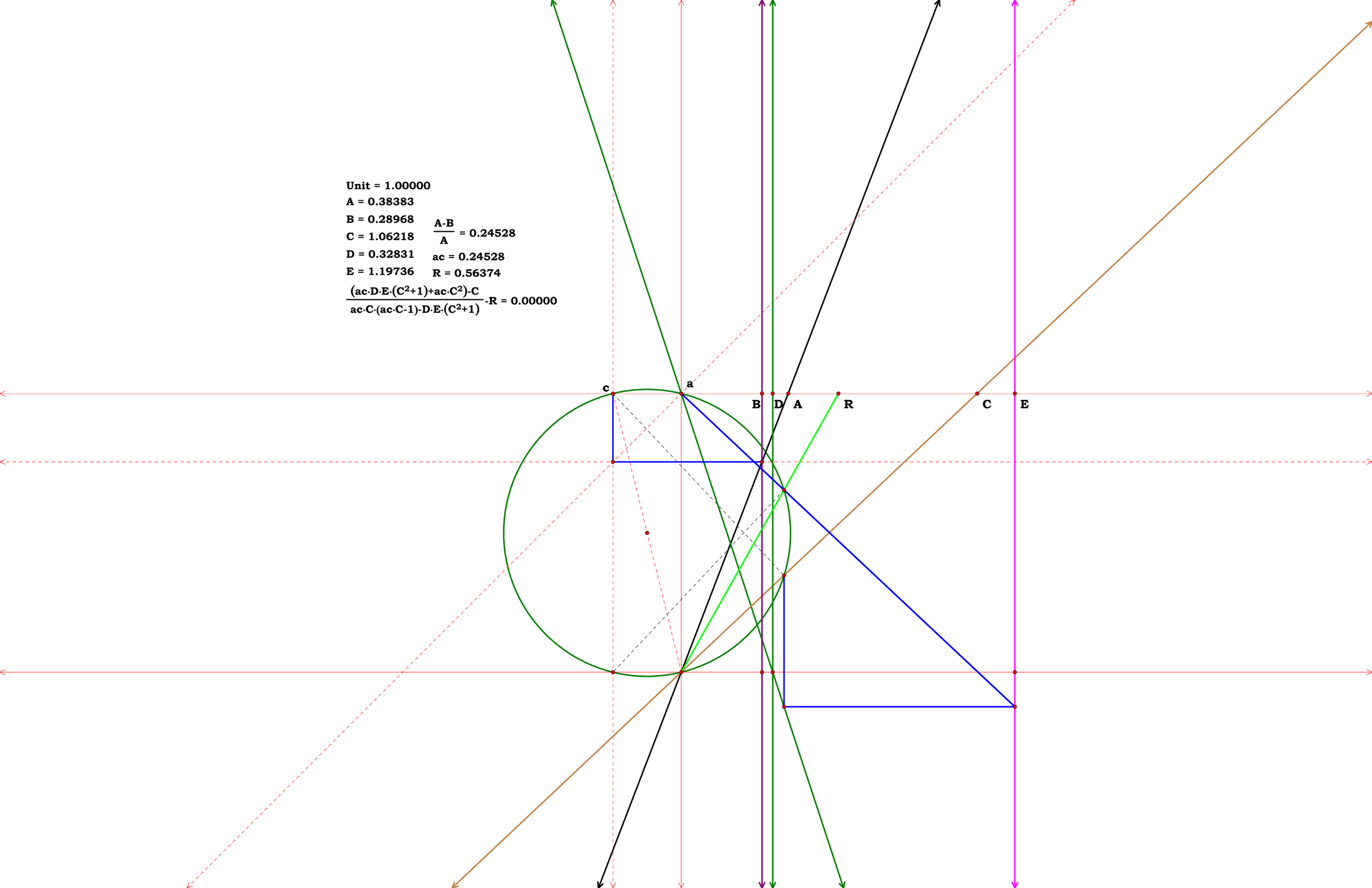
E = 1.19736

$\frac{A-B}{A} = 0.24528$

ac = 0.24528

R = 0.56374

$\frac{(ac \cdot D \cdot E \cdot (C^2+1)+ac \cdot C^2)-C}{ac \cdot C \cdot (ac \cdot C-1)-D \cdot E \cdot (C^2+1)}-R = 0.00000$



Unit = 1.00000
A = 0.52385
B = 0.17140
C = 1.33013
D = 0.71455
E = 0.49729

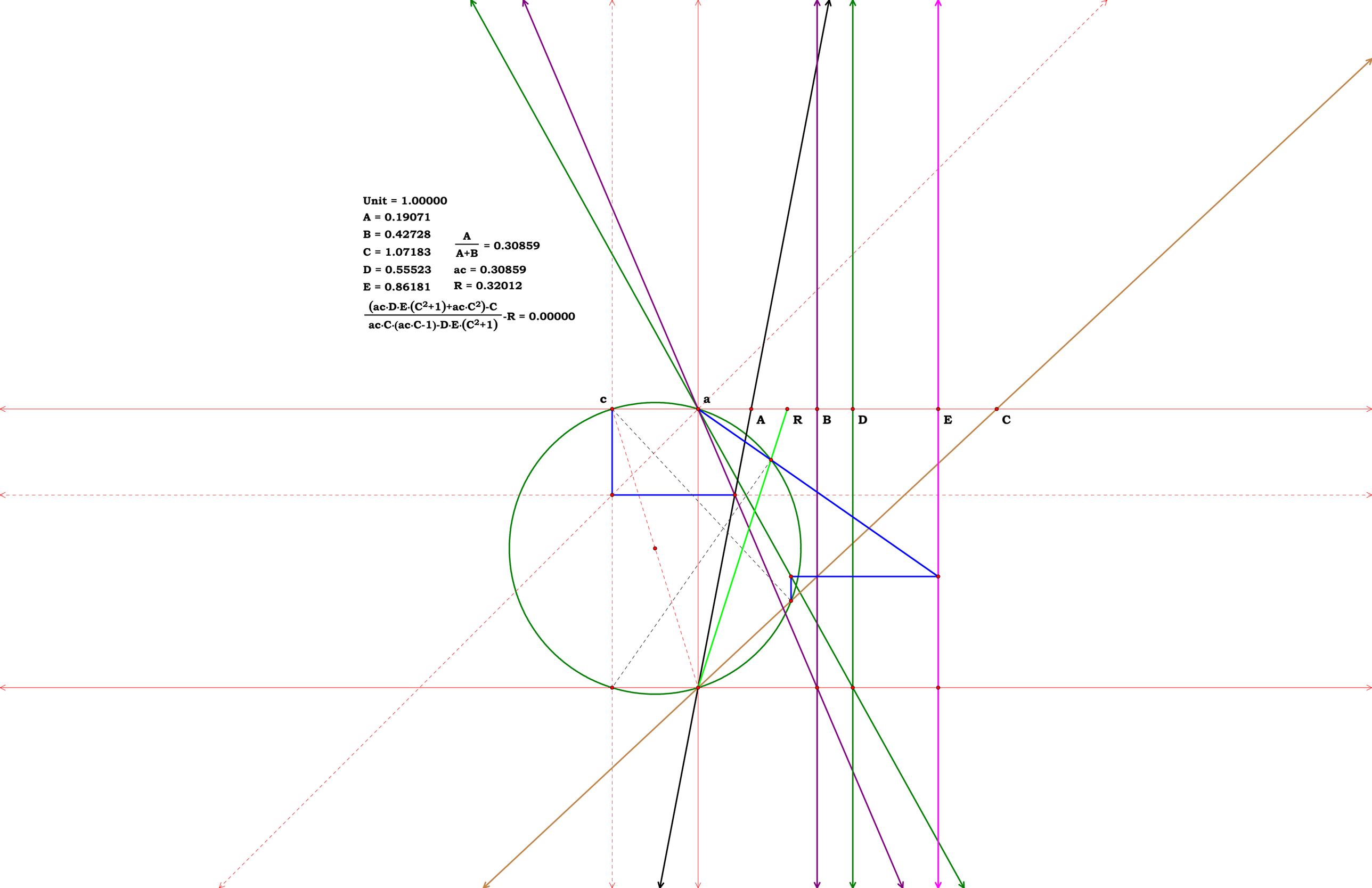
$\frac{B}{A}$ = 0.32719

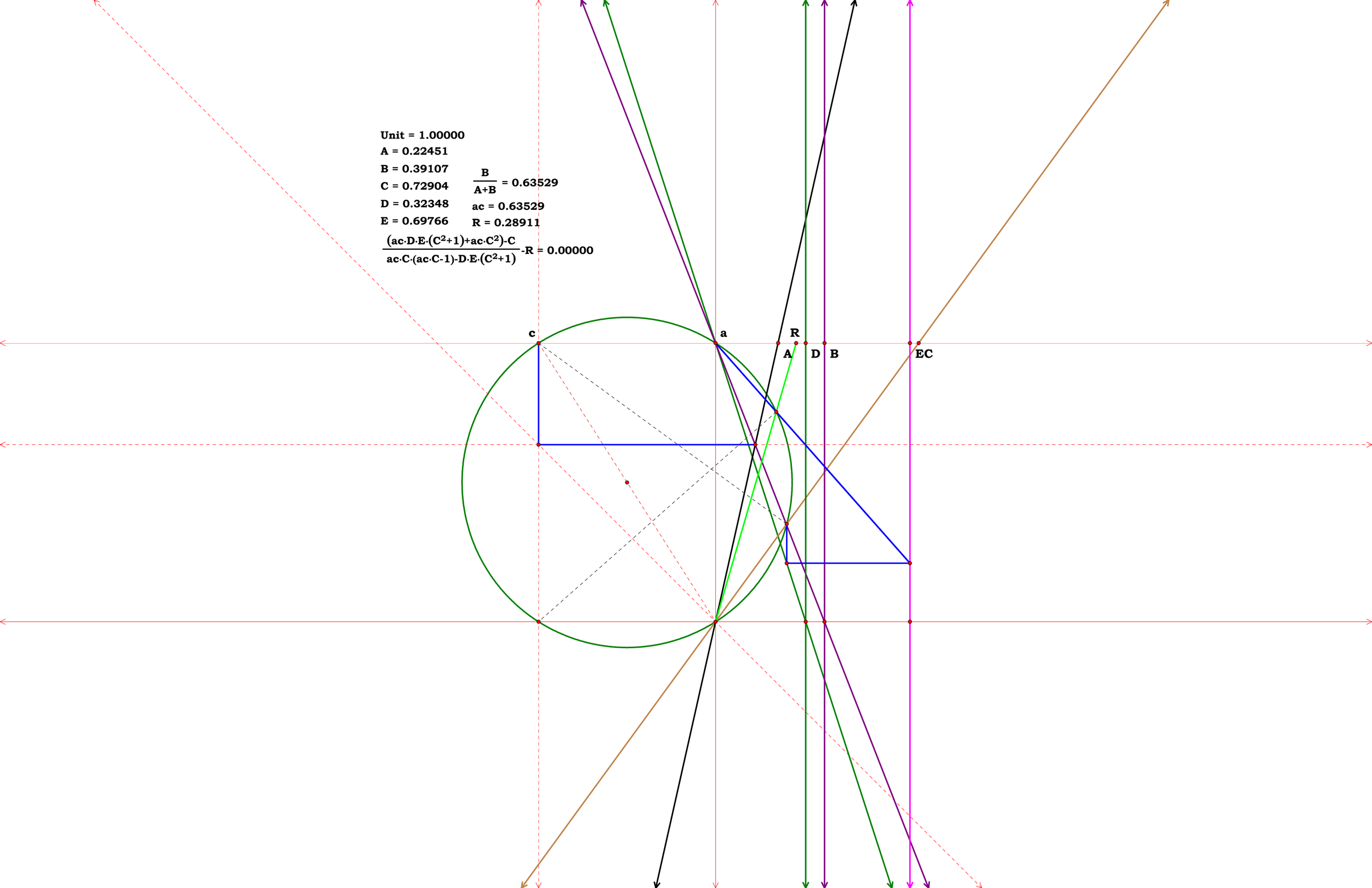
ac = 0.32719

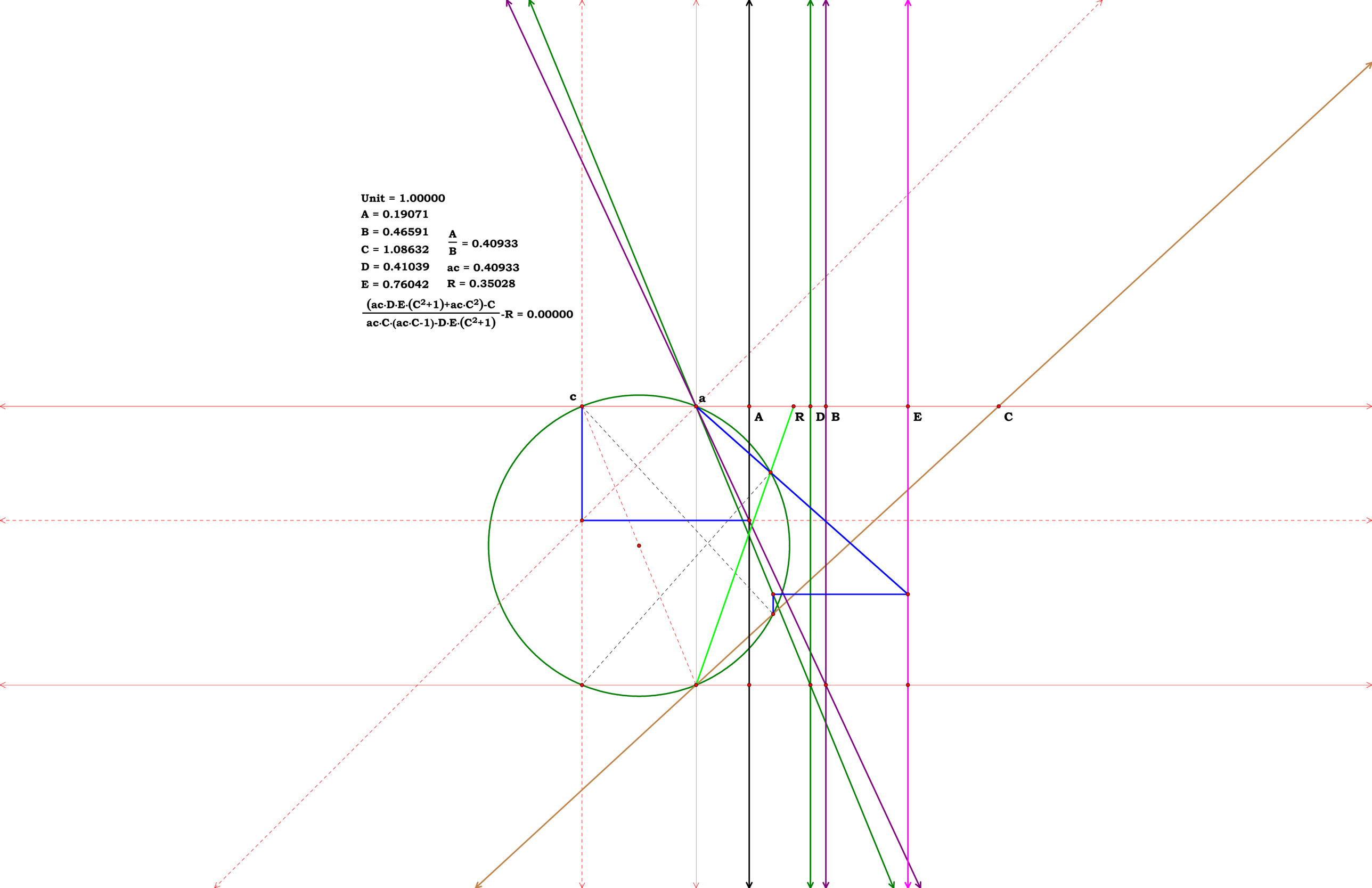
R = 0.34906

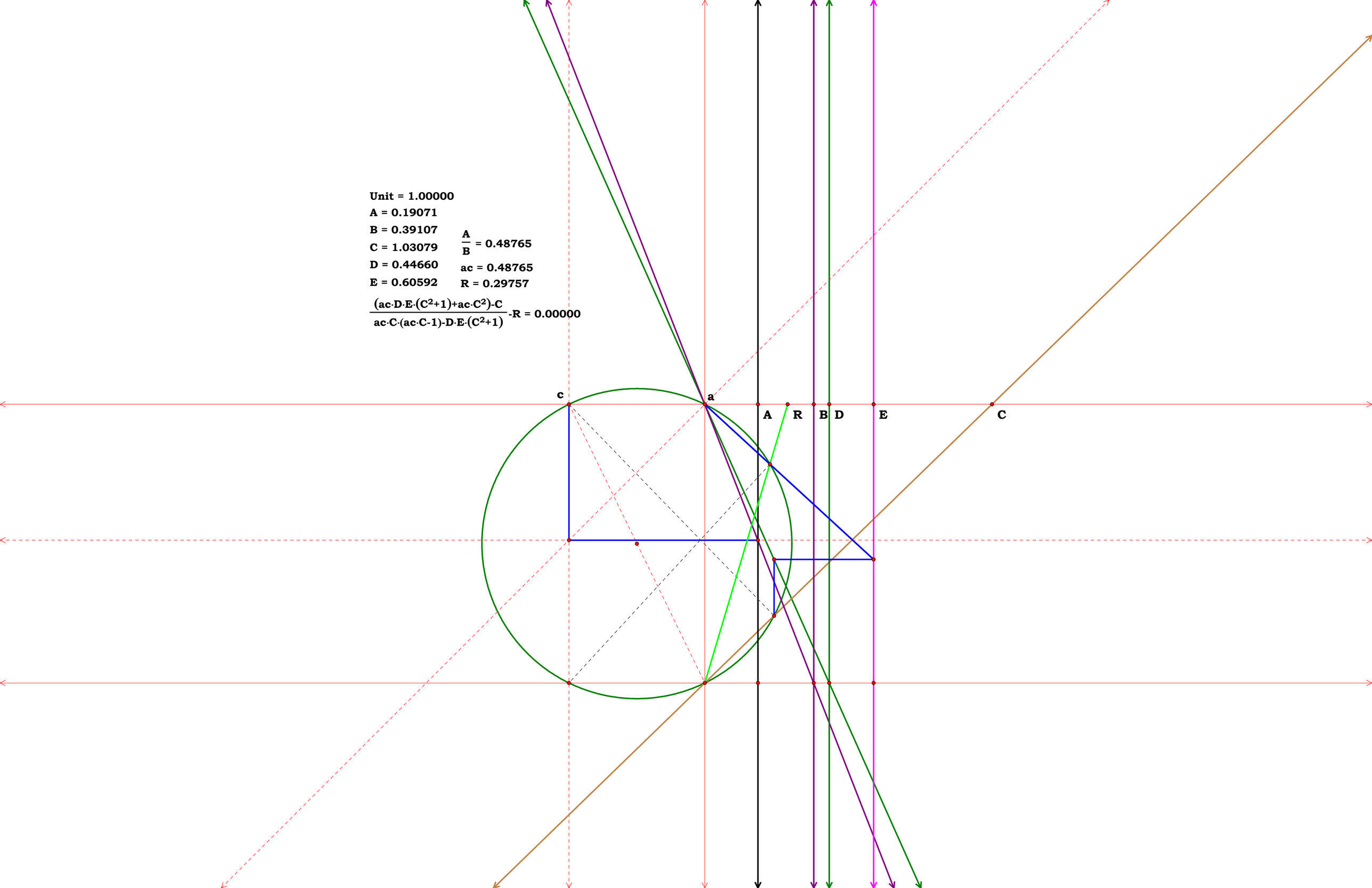
$\frac{(ac \cdot D \cdot E \cdot (C^2+1)+ac \cdot C^2)-C}{ac \cdot C \cdot (ac \cdot C-1)-D \cdot E \cdot (C^2+1)}$ -R = 0.00000

c a B R E A D C


Unit = 1.00000
A = 0.19071
B = 0.42728
C = 1.07183
D = 0.55523
E = 0.86181
$\frac{A}{A+B}$ = 0.30859
ac = 0.30859
R = 0.32012
$\frac{(ac\cdot D\cdot E\cdot(C^2+1)+ac\cdot C^2)-C}{ac\cdot C\cdot(ac\cdot C-1)-D\cdot E\cdot(C^2+1)}$-R = 0.00000
c
a
A
R
B
D
E
C


Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.72904
D = 0.32348
E = 0.69766
B / (A+B) = 0.63529
ac = 0.63529
R = 0.28911
((ac·D·E·(C²+1)+ac·C²)-C) / (ac·C·(ac·C-1)-D·E·(C²+1)) -R = 0.00000
c
a
R
A
D
B
EC


Unit = 1.00000
A = 0.19071
B = 0.46591
C = 1.08632
D = 0.41039
E = 0.76042
A/B = 0.40933
ac = 0.40933
R = 0.35028
((ac·D·E·(C²+1)+ac·C²)-C)/(ac·C·(ac·C-1)-D·E·(C²+1))-R = 0.00000
c
a
A
R
D
B
E
C


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.03079
D = 0.44660
E = 0.60592
A/B = 0.48765
ac = 0.48765
R = 0.29757
(ac·D·E·(C²+1)+ac·C²)-C / ac·C·(ac·C-1)-D·E·(C²+1) -R = 0.00000
c
a
A
R
B
D
E
C

Unit = 1.00000

A = 0.63972

B = 0.35486

C = 1.34703

D = 0.47557

E = 1.01631

$\frac{A-B}{A}$ = 0.44528

ac = 0.44528

R = 0.80864

$\frac{D\cdot E\cdot(C^2+1)\cdot(1-ac\cdot A)-A\cdot C\cdot(ac\cdot C-1)}{D\cdot E\cdot(C^2+1)\cdot(ac+A)+ac\cdot A\cdot C\cdot(1-ac\cdot C)}$ -R = 0.00000

c

a

B

D

A

R

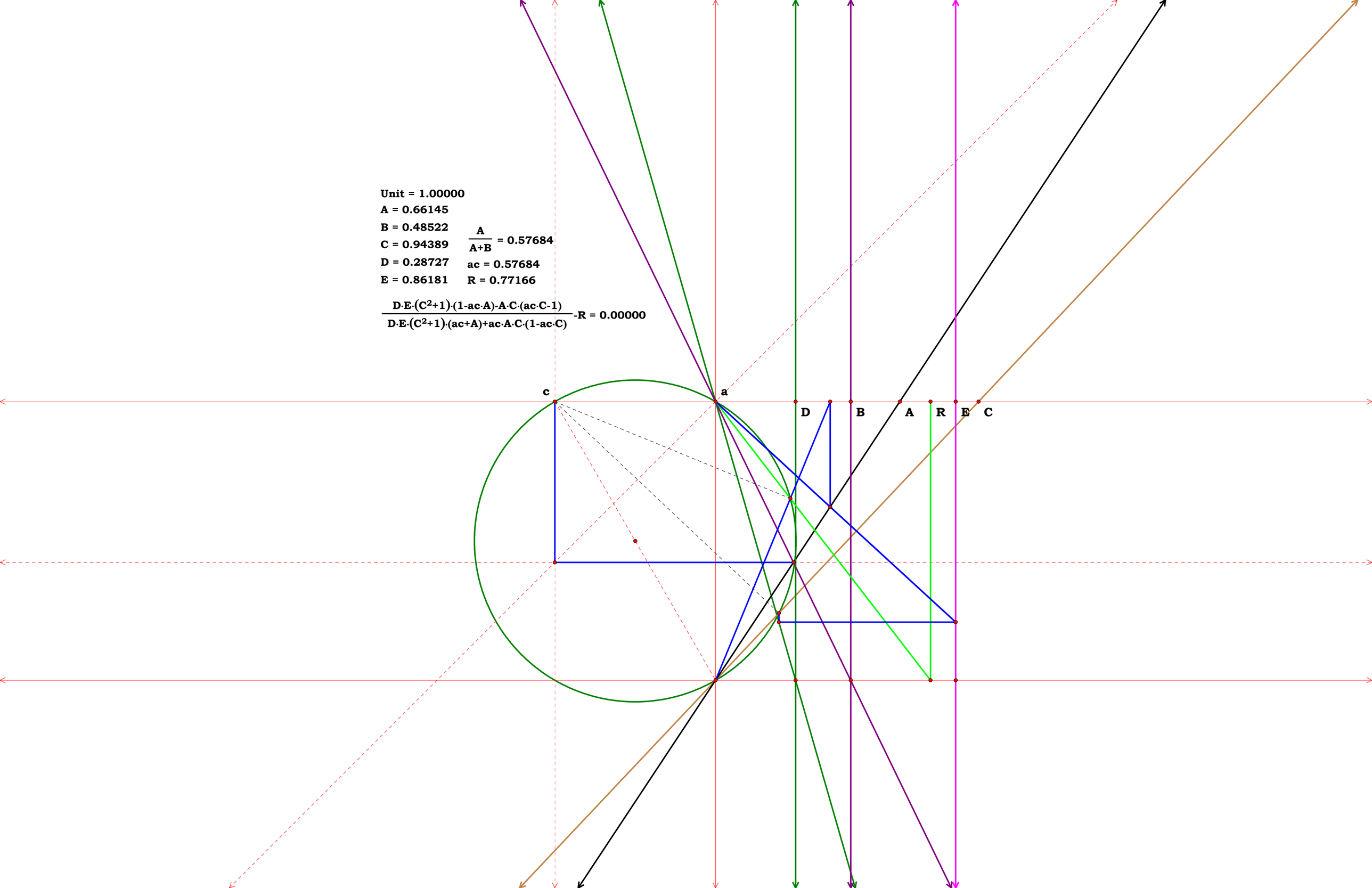
E

C

Unit = 1.00000
A = 0.73387
B = 0.21002 $\frac{B}{A}$ = 0.28618
C = 1.02597 ac = 0.28618
D = 0.53350 R = 1.14577
E = 0.86181

$$\frac{D\cdot E\cdot(C^2+1)\cdot(1-ac\cdot A)-A\cdot C\cdot(ac\cdot C-1)}{D\cdot E\cdot(C^2+1)\cdot(ac+A)+ac\cdot A\cdot C\cdot(1-ac\cdot C)}-R = 0.00000$$

c a B D A E C R


Unit = 1.00000
A = 0.66145
B = 0.48522
C = 0.94389
D = 0.28727
E = 0.86181
A/(A+B) = 0.57684
ac = 0.57684
R = 0.77166
(D·E·(C²+1)·(1-ac·A)-A·C·(ac·C-1))/(D·E·(C²+1)·(ac+A)+ac·A·C·(1-ac·C))-R = 0.00000
c
a
D
B
A
R
E
C

Unit = 1.00000

A = 0.58661

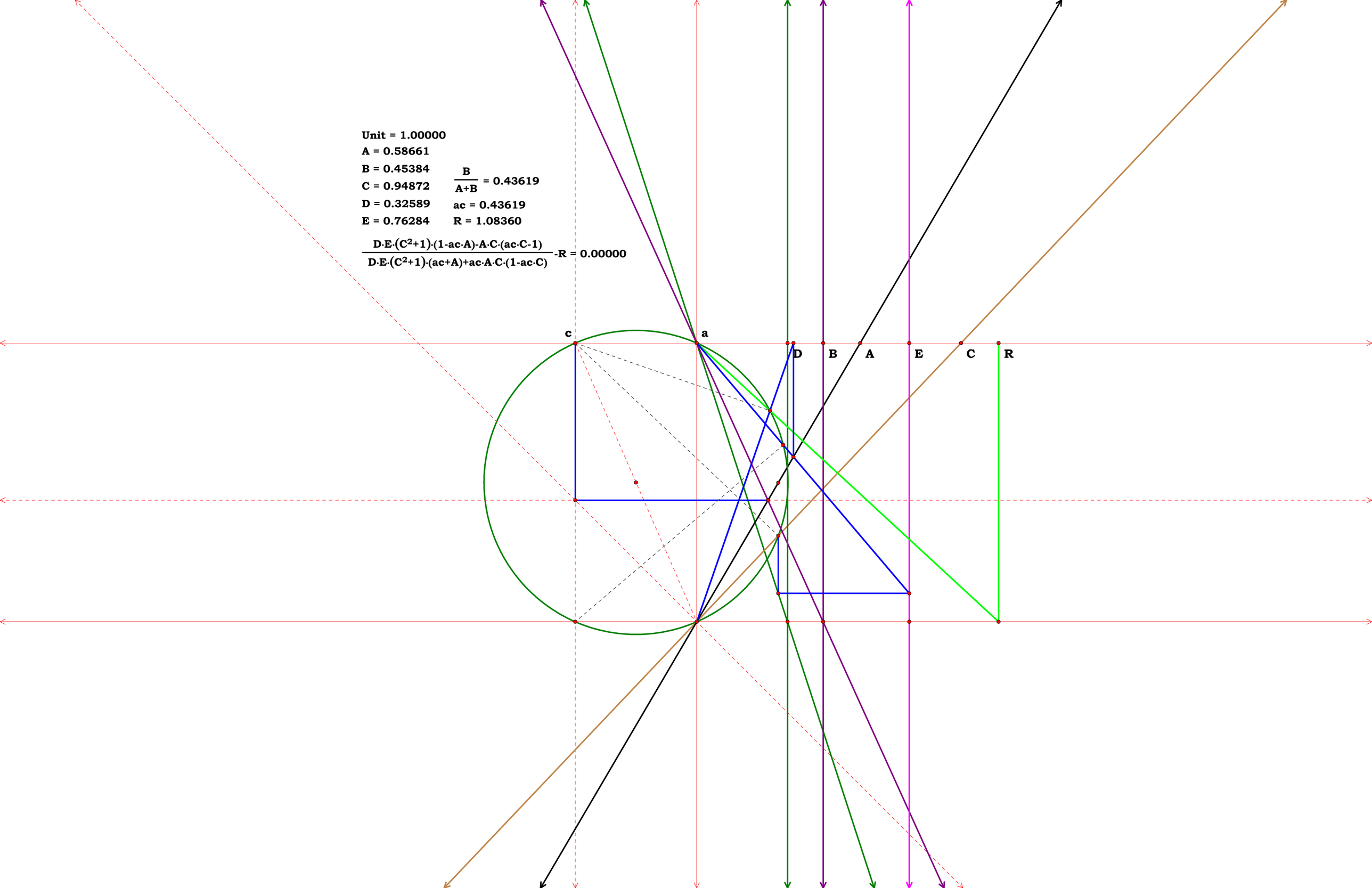
B = 0.45384 $\quad \frac{B}{A+B} = 0.43619$

C = 0.94872 $\quad ac = 0.43619$

D = 0.32589 $\quad R = 1.08360$

E = 0.76284

$$\frac{D\cdot E\cdot(C^2+1)\cdot(1-ac\cdot A)-A\cdot C\cdot(ac\cdot C-1)}{D\cdot E\cdot(C^2+1)\cdot(ac+A)+ac\cdot A\cdot C\cdot(1-ac\cdot C)}-R = 0.00000$$



Unit = 1.00000

A = 0.42246

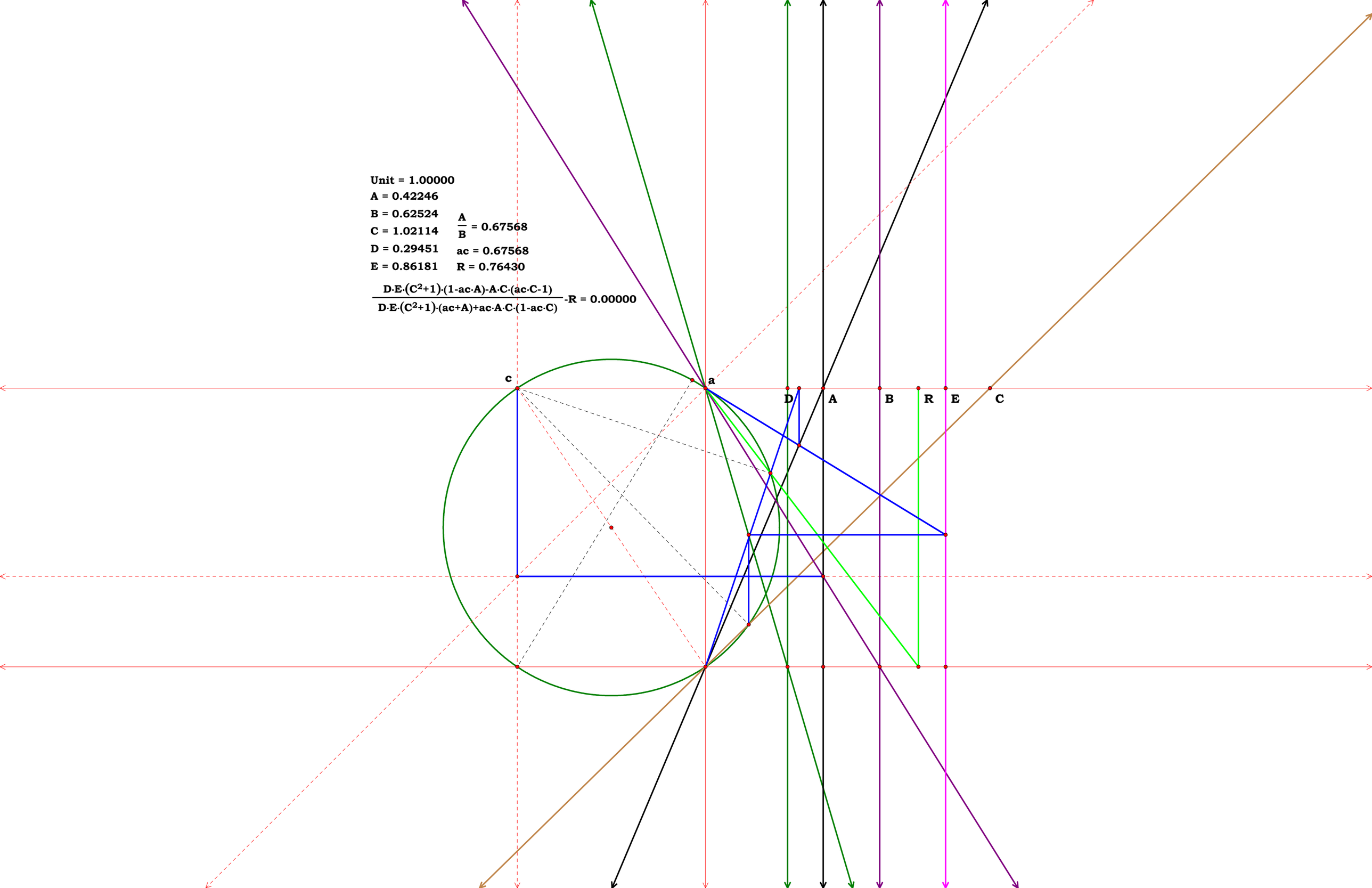
B = 0.62524 $\frac{A}{B}$ = 0.67568

C = 1.02114 ac = 0.67568

D = 0.29451 R = 0.76430

E = 0.86181

$$\frac{D\cdot E\cdot\left(C^2+1\right)\cdot(1-ac\cdot A)-A\cdot C\cdot(ac\cdot C-1)}{D\cdot E\cdot\left(C^2+1\right)\cdot(ac+A)+ac\cdot A\cdot C\cdot(1-ac\cdot C)}-R = 0.00000$$



Unit = 1.00000

A = 0.49488

B = 0.65420

C = 1.09597

D = 0.42487

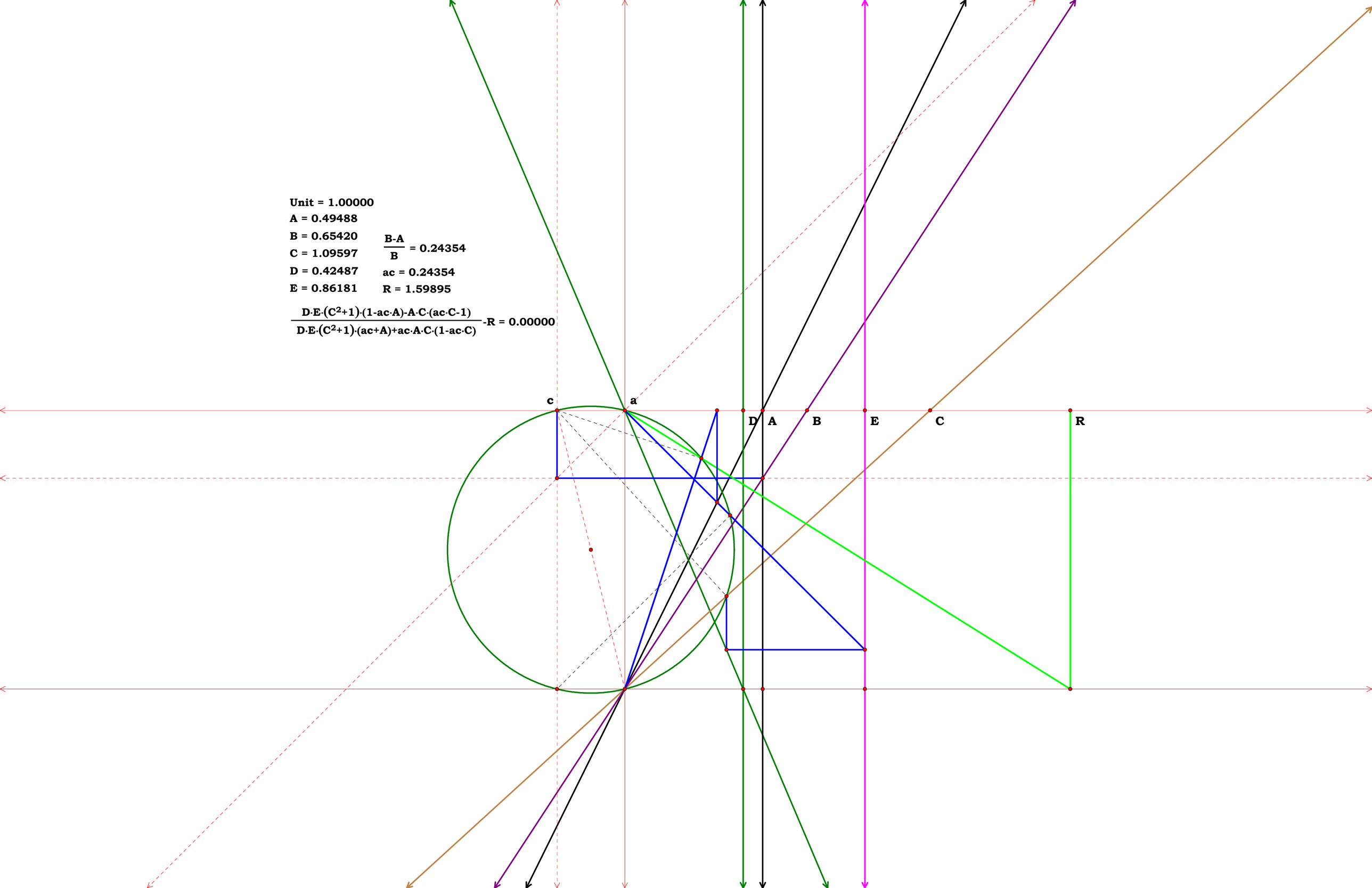
E = 0.86181

$\frac{B-A}{B} = 0.24354$

ac = 0.24354

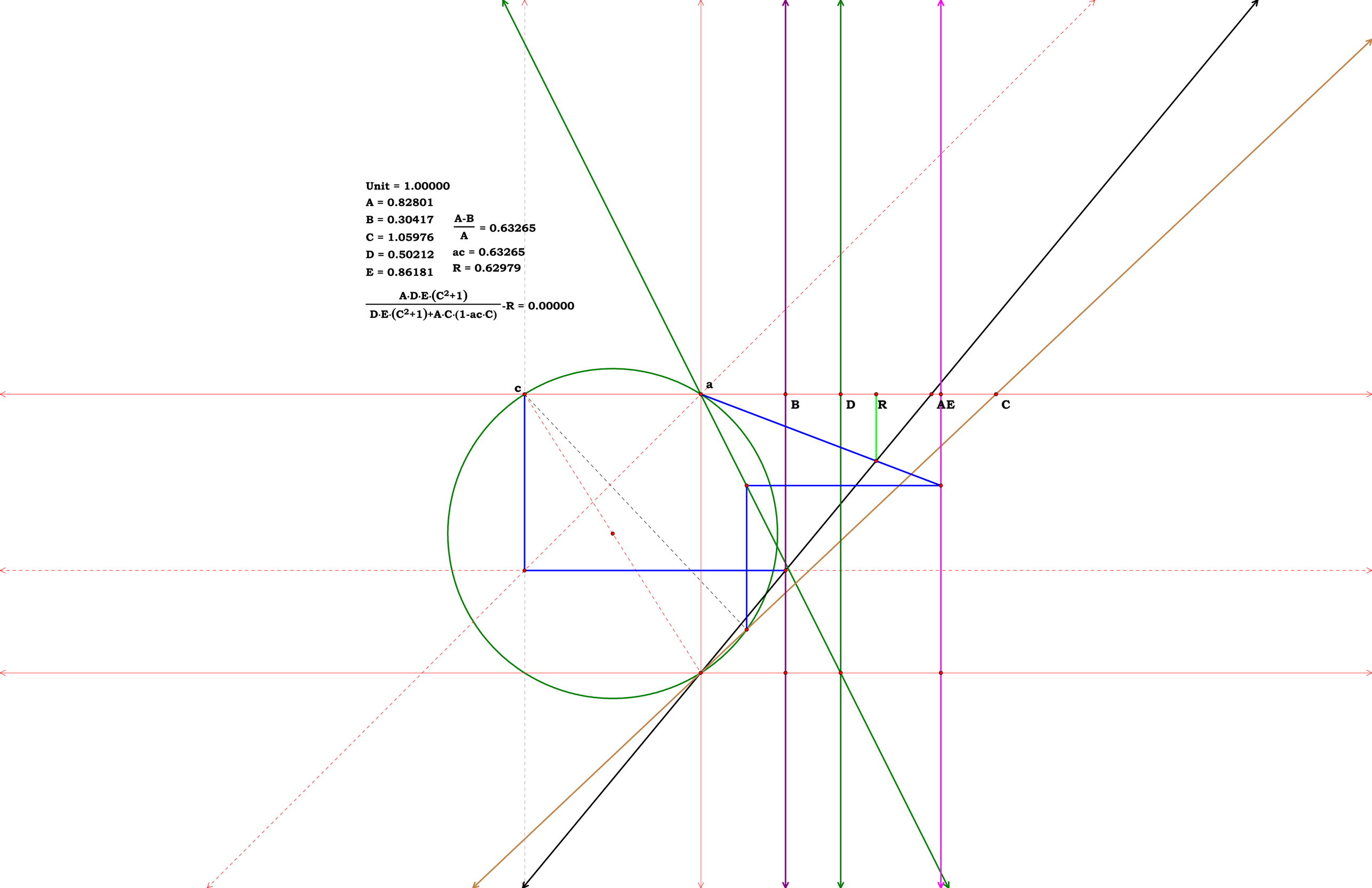
R = 1.59895

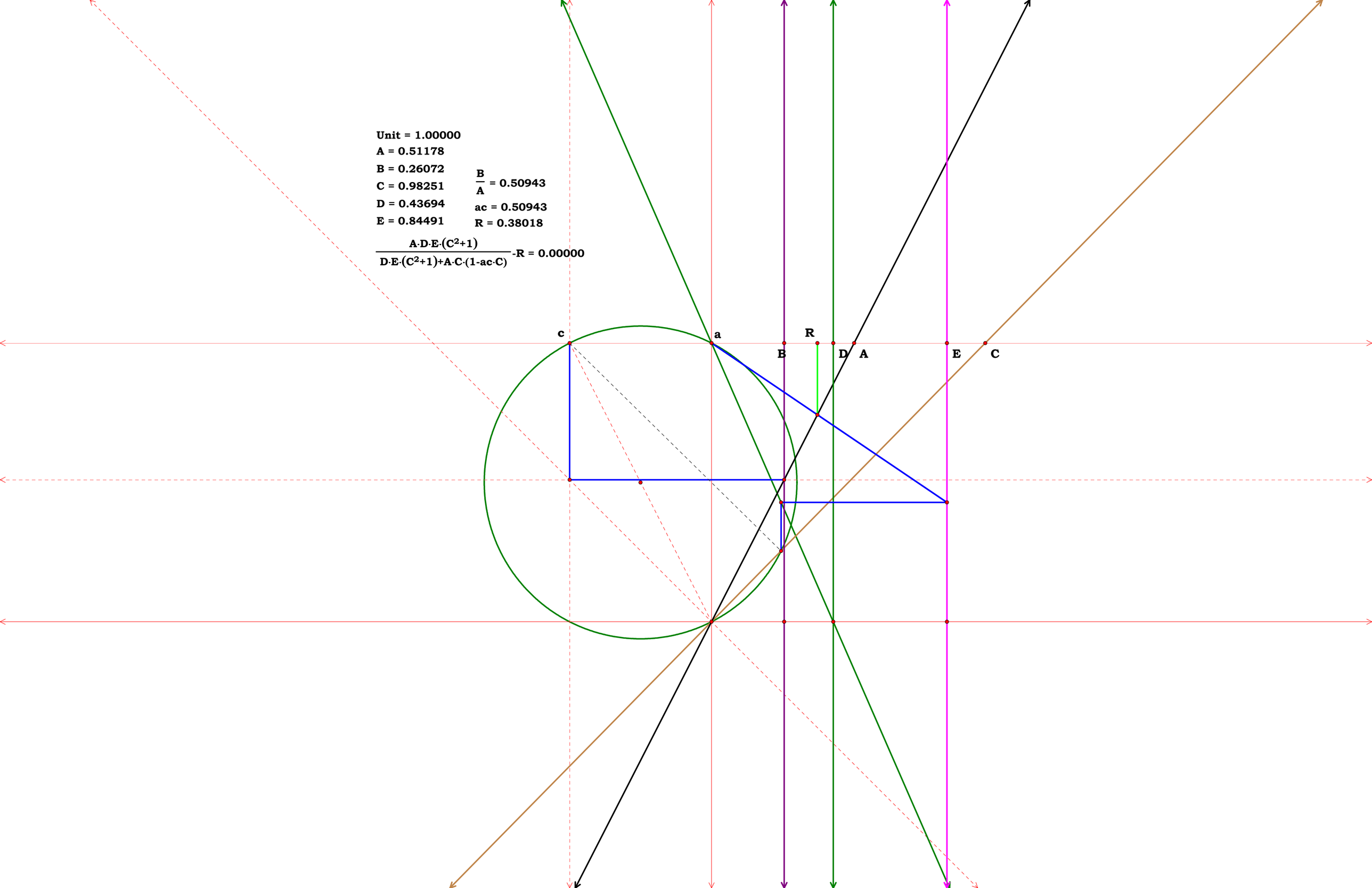
$\frac{D\cdot E\cdot(C^2+1)\cdot(1-ac\cdot A)-A\cdot C\cdot(ac\cdot C-1)}{D\cdot E\cdot(C^2+1)\cdot(ac+A)+ac\cdot A\cdot C\cdot(1-ac\cdot C)} - R = 0.00000$

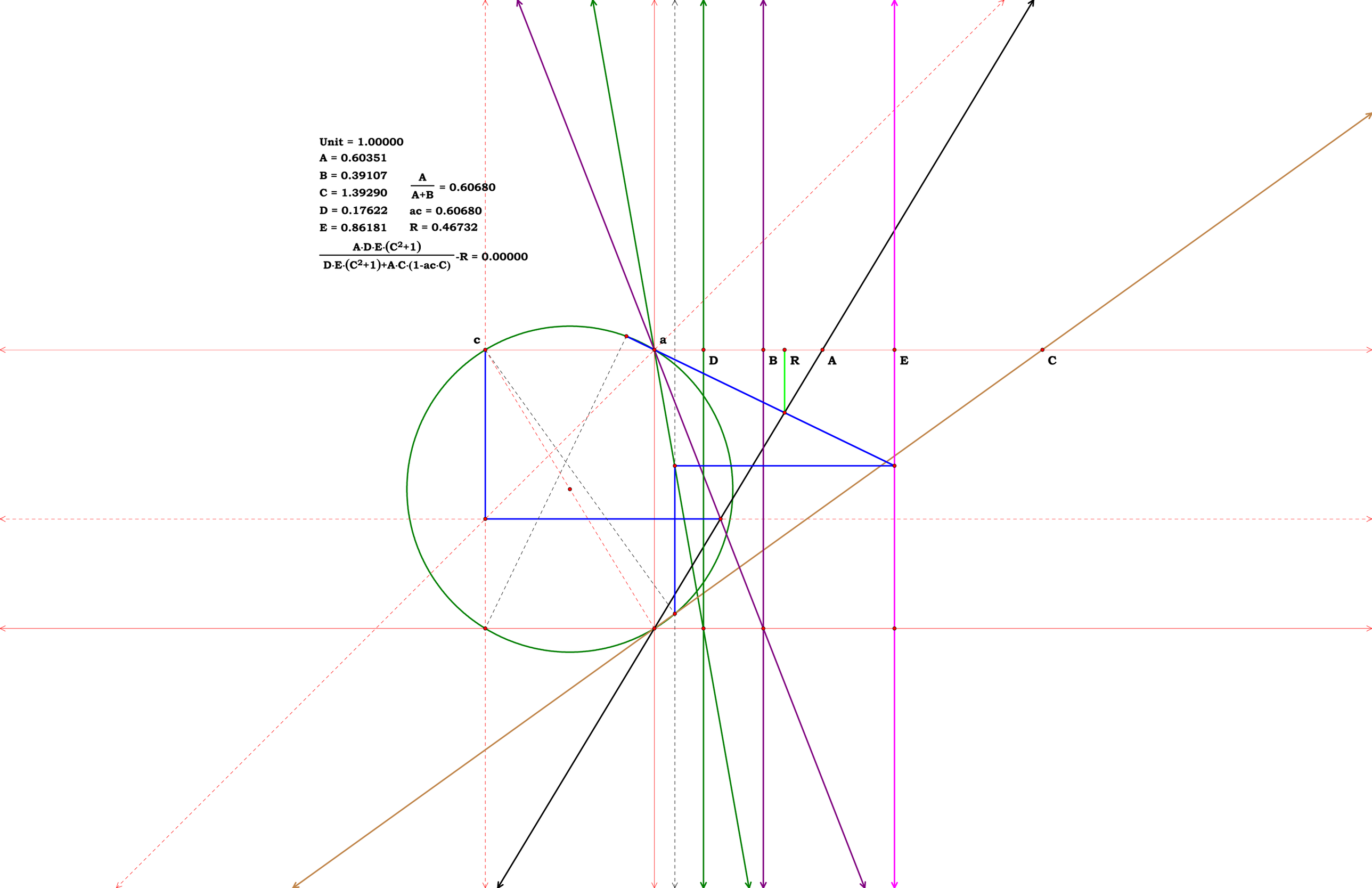


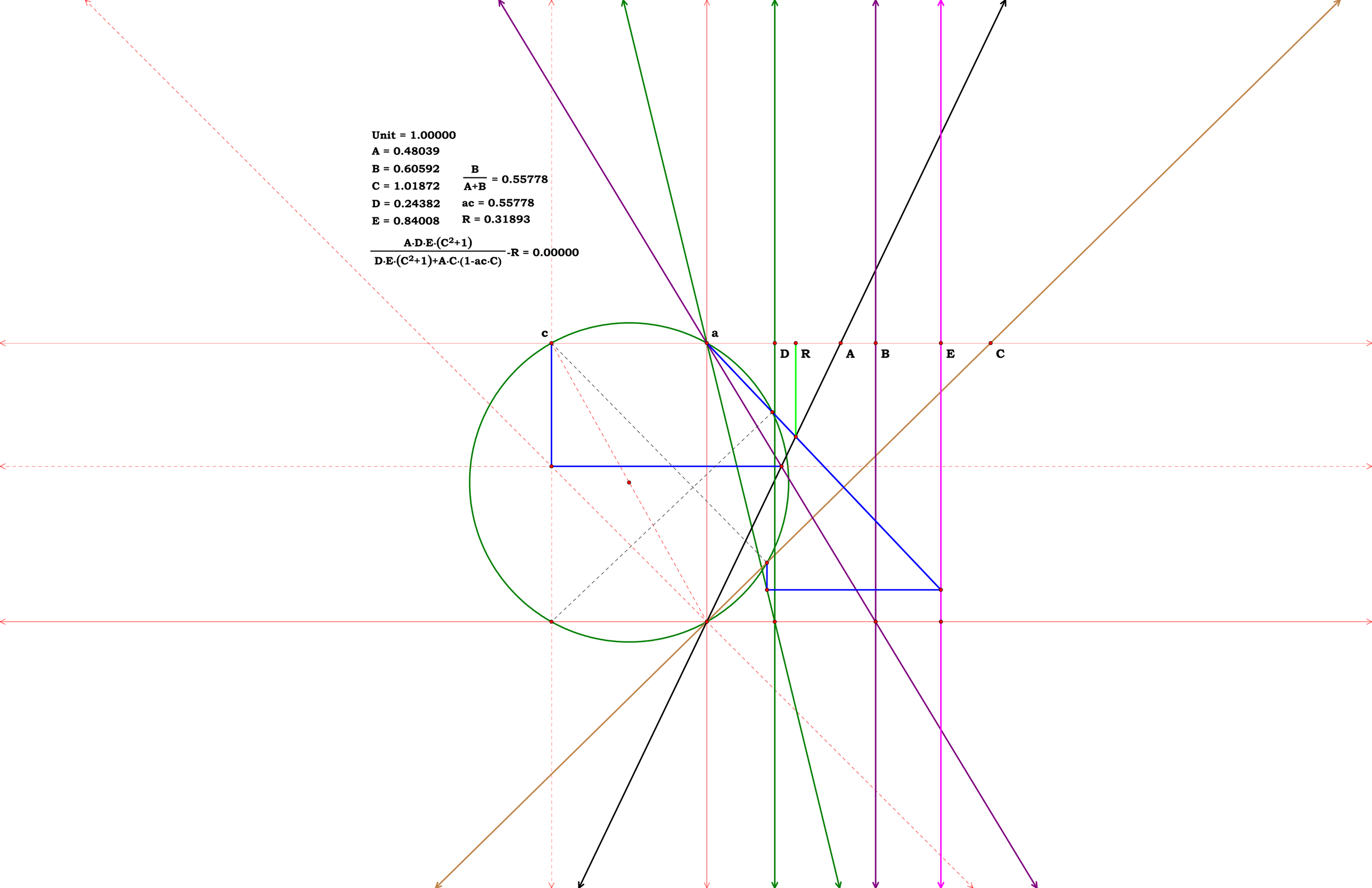
Unit = 1.00000
A = 0.82801
B = 0.30417 $\frac{A-B}{A}$ = 0.63265
C = 1.05976 ac = 0.63265
D = 0.50212 R = 0.62979
E = 0.86181

$$\frac{A\cdot D\cdot E\cdot(C^2+1)}{D\cdot E\cdot(C^2+1)+A\cdot C\cdot(1-ac\cdot C)}-R = 0.00000$$




Unit = 1.00000
A = 0.51178
B = 0.26072
C = 0.98251
D = 0.43694
E = 0.84491
B/A = 0.50943
ac = 0.50943
R = 0.38018
A·D·E·(C²+1) / D·E·(C²+1)+A·C·(1-ac·C) -R = 0.00000
c
a
R
B
D
A
E
C


Unit = 1.00000
A = 0.60351
B = 0.39107
C = 1.39290
D = 0.17622
E = 0.86181
A/(A+B) = 0.60680
ac = 0.60680
R = 0.46732
A·D·E·(C²+1) / D·E·(C²+1)+A·C·(1-ac·C) -R = 0.00000
c
a
D
B
R
A
E
C


Unit = 1.00000
A = 0.48039
B = 0.60592
C = 1.01872
D = 0.24382
E = 0.84008
B/(A+B) = 0.55778
ac = 0.55778
R = 0.31893
A·D·E·(C²+1) / (D·E·(C²+1)+A·C·(1-ac·C)) -R = 0.00000
c
a
D
R
A
B
E
C

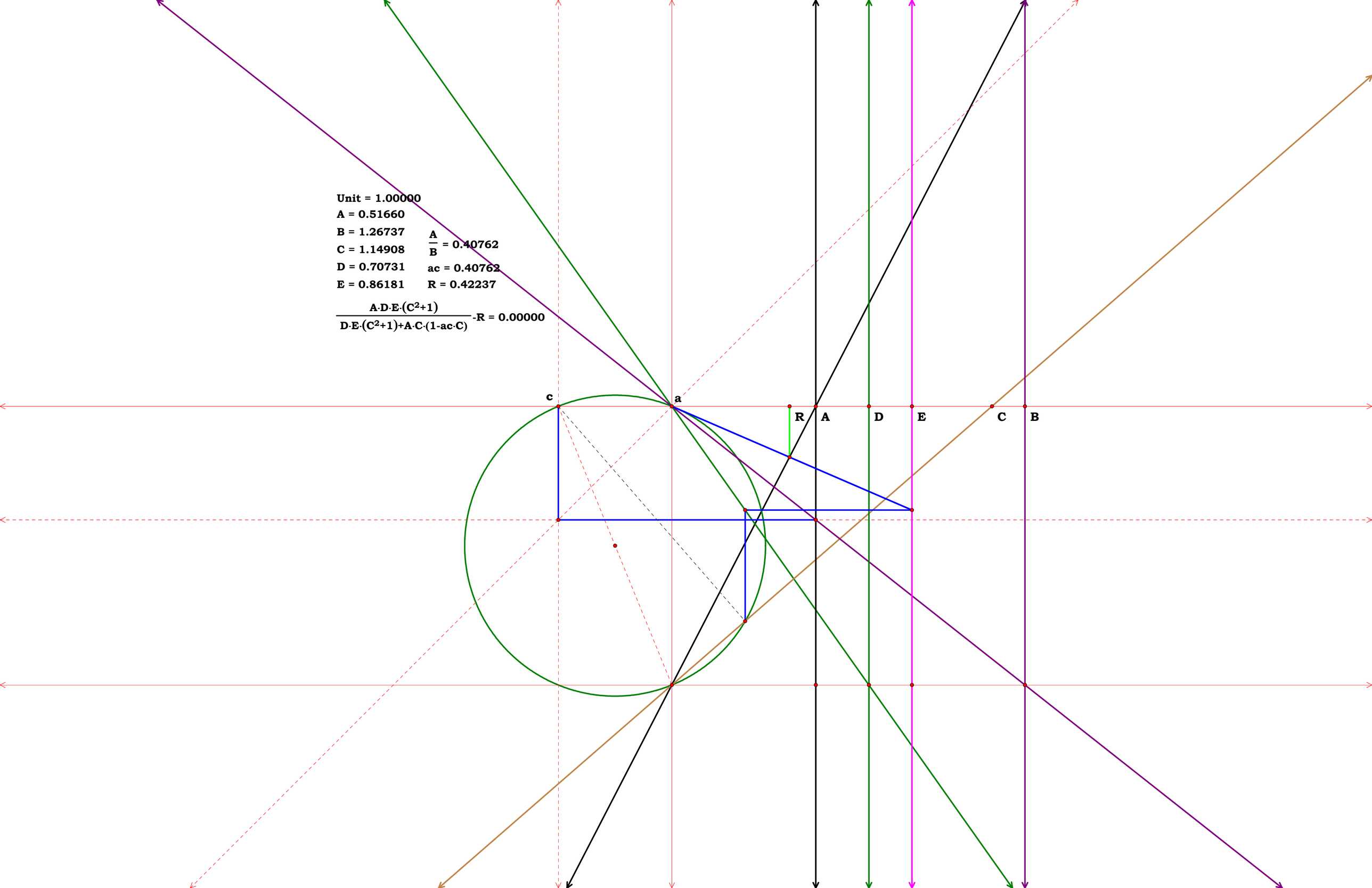
Unit = 1.00000
A = 0.51660
B = 1.26737
C = 1.14908
D = 0.70731
E = 0.86181

$\frac{A}{B}$ = 0.40762

ac = 0.40762

R = 0.42237

$\frac{A \cdot D \cdot E \cdot (C^2+1)}{D \cdot E \cdot (C^2+1) + A \cdot C \cdot (1-ac \cdot C)} - R = 0.00000$



Unit = 1.00000

A = 0.55281

B = 0.80387

C = 1.25771

D = 0.48522

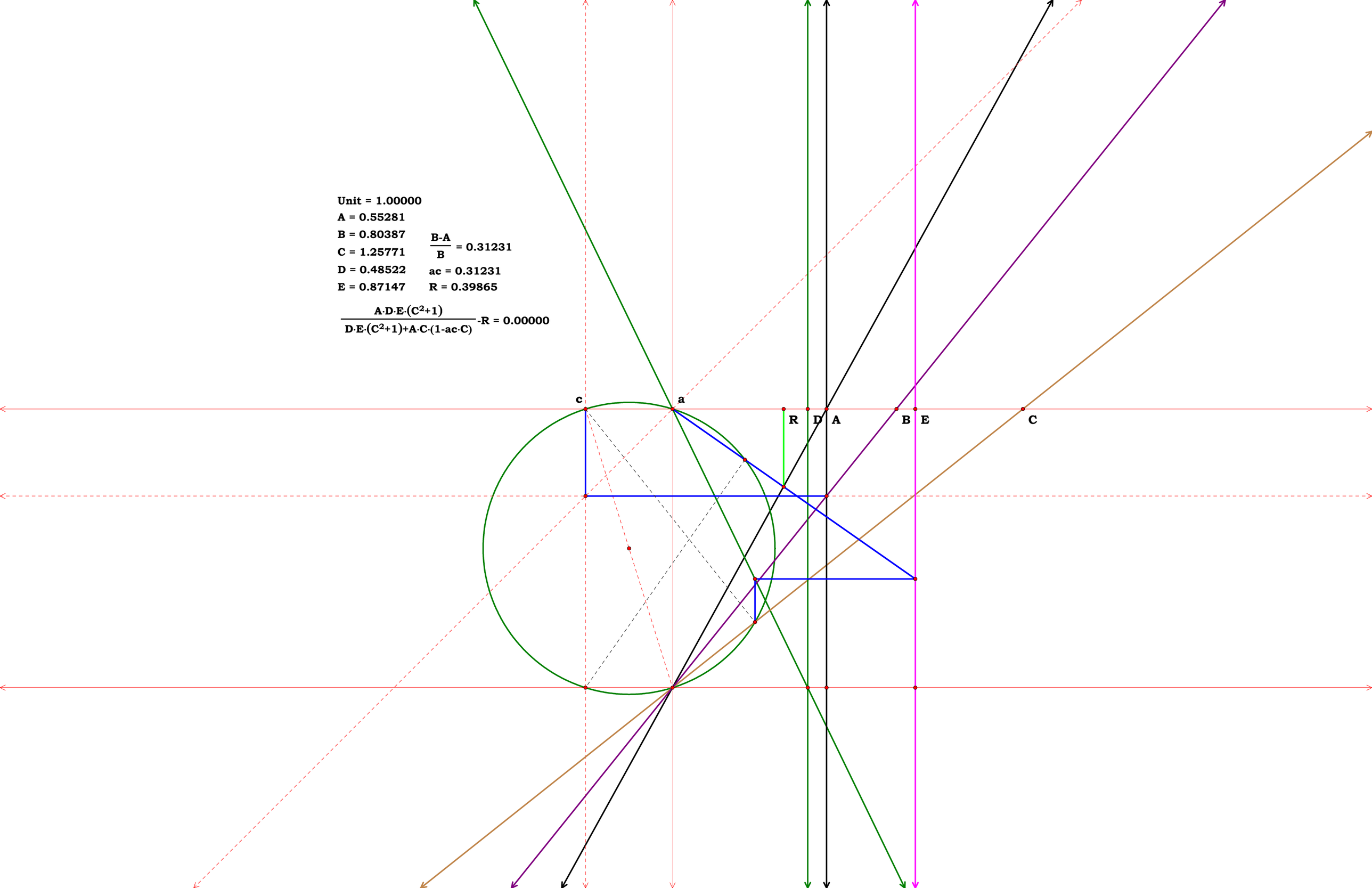
E = 0.87147

$\frac{B-A}{B}$ = 0.31231

ac = 0.31231

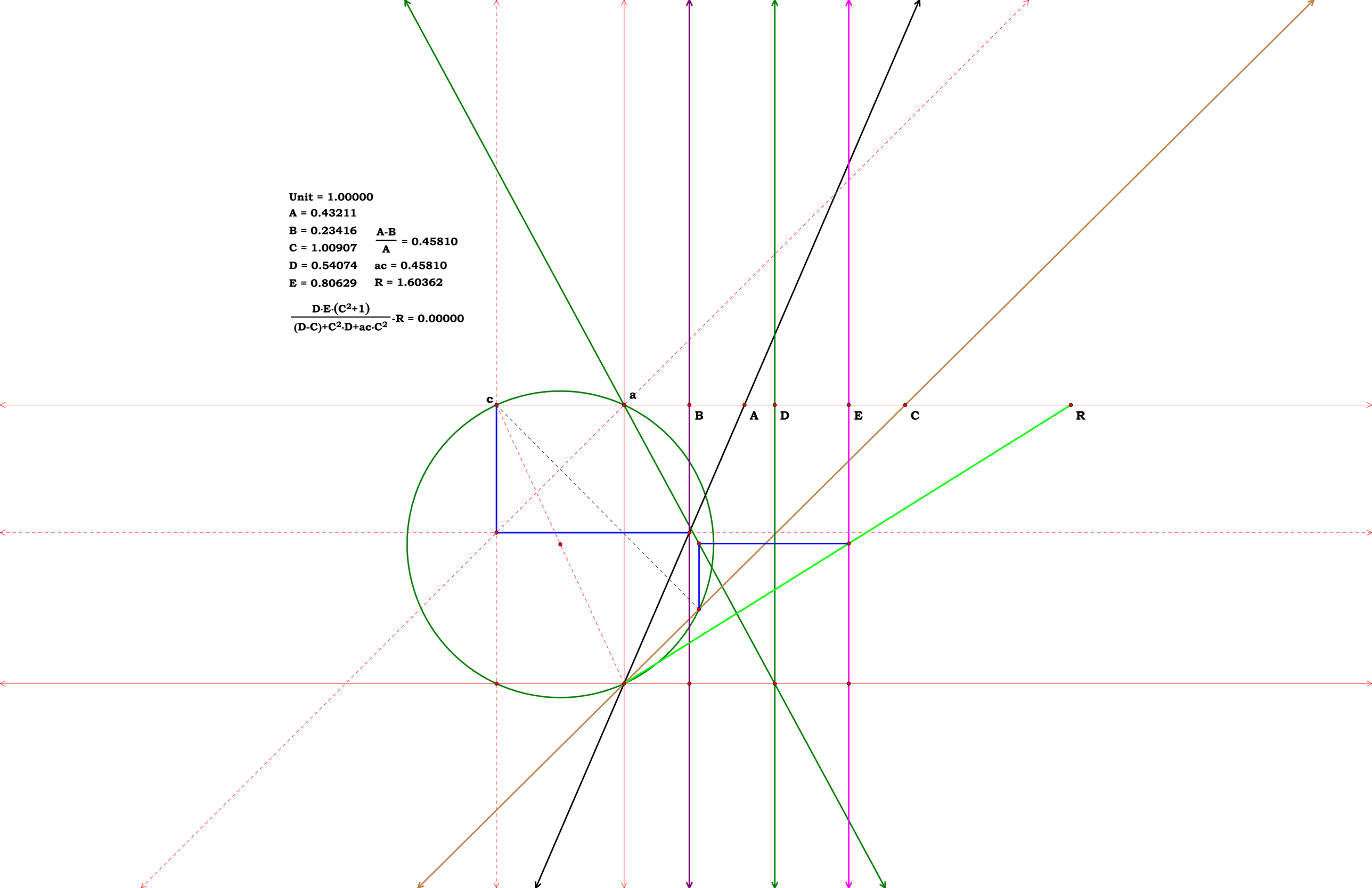
R = 0.39865

$\frac{A \cdot D \cdot E \cdot (C^2+1)}{D \cdot E \cdot (C^2+1)+A \cdot C \cdot (1-ac \cdot C)}$ -R = 0.00000



Unit = 1.00000
A = 0.43211
B = 0.23416 $\frac{A-B}{A}$ = 0.45810
C = 1.00907 ac = 0.45810
D = 0.54074 R = 1.60362
E = 0.80629

$\frac{D \cdot E \cdot (C^2+1)}{(D-C)+C^2 \cdot D+ac \cdot C^2}-R$ = 0.00000



Unit = 1.00000

A = 0.52385

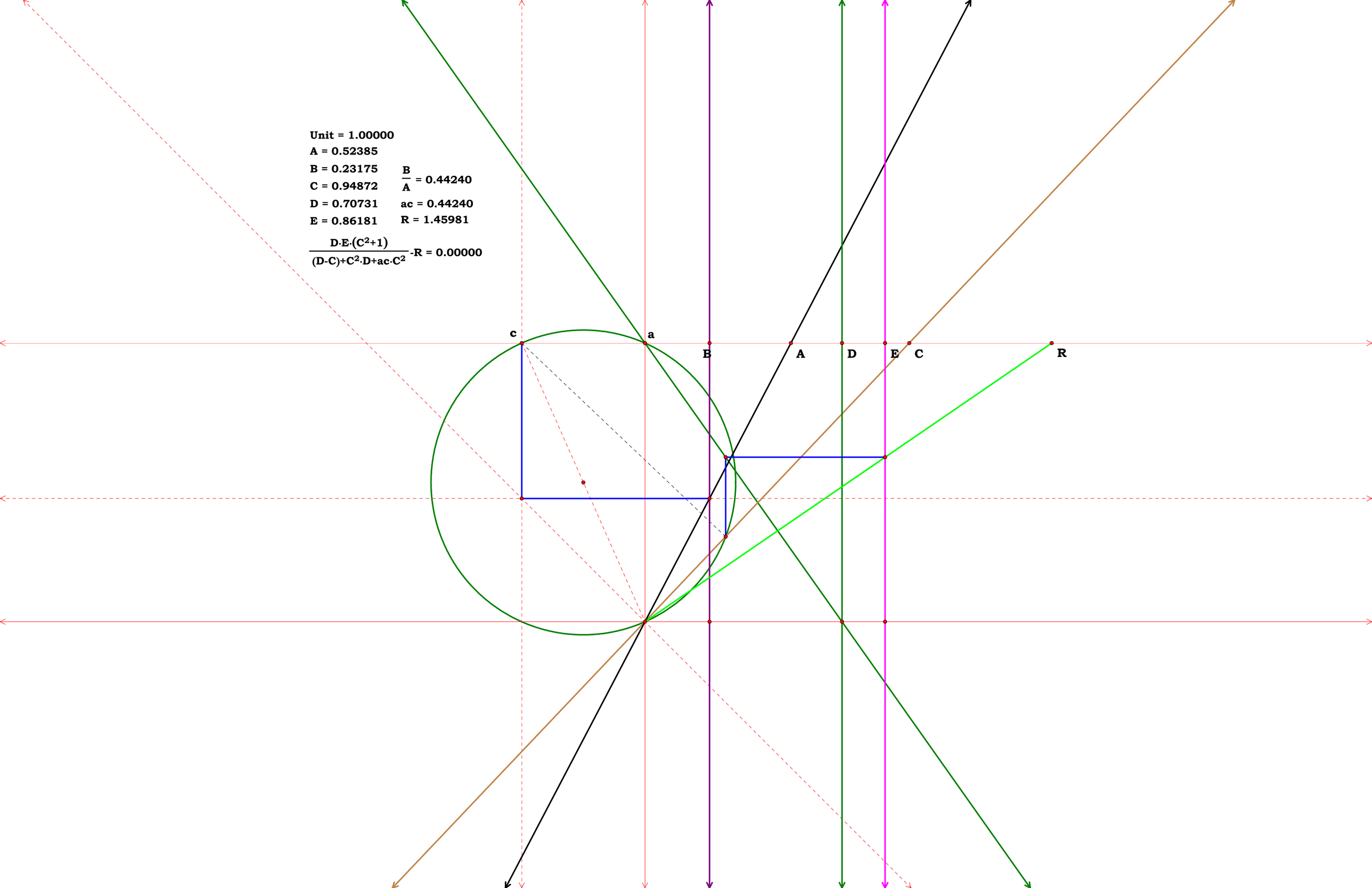
B = 0.23175 $\frac{B}{A}$ = 0.44240

C = 0.94872 ac = 0.44240

D = 0.70731 R = 1.45981

E = 0.86181

$$\frac{D\cdot E\cdot(C^2+1)}{(D-C)+C^2\cdot D+ac\cdot C^2}-R = 0.00000$$



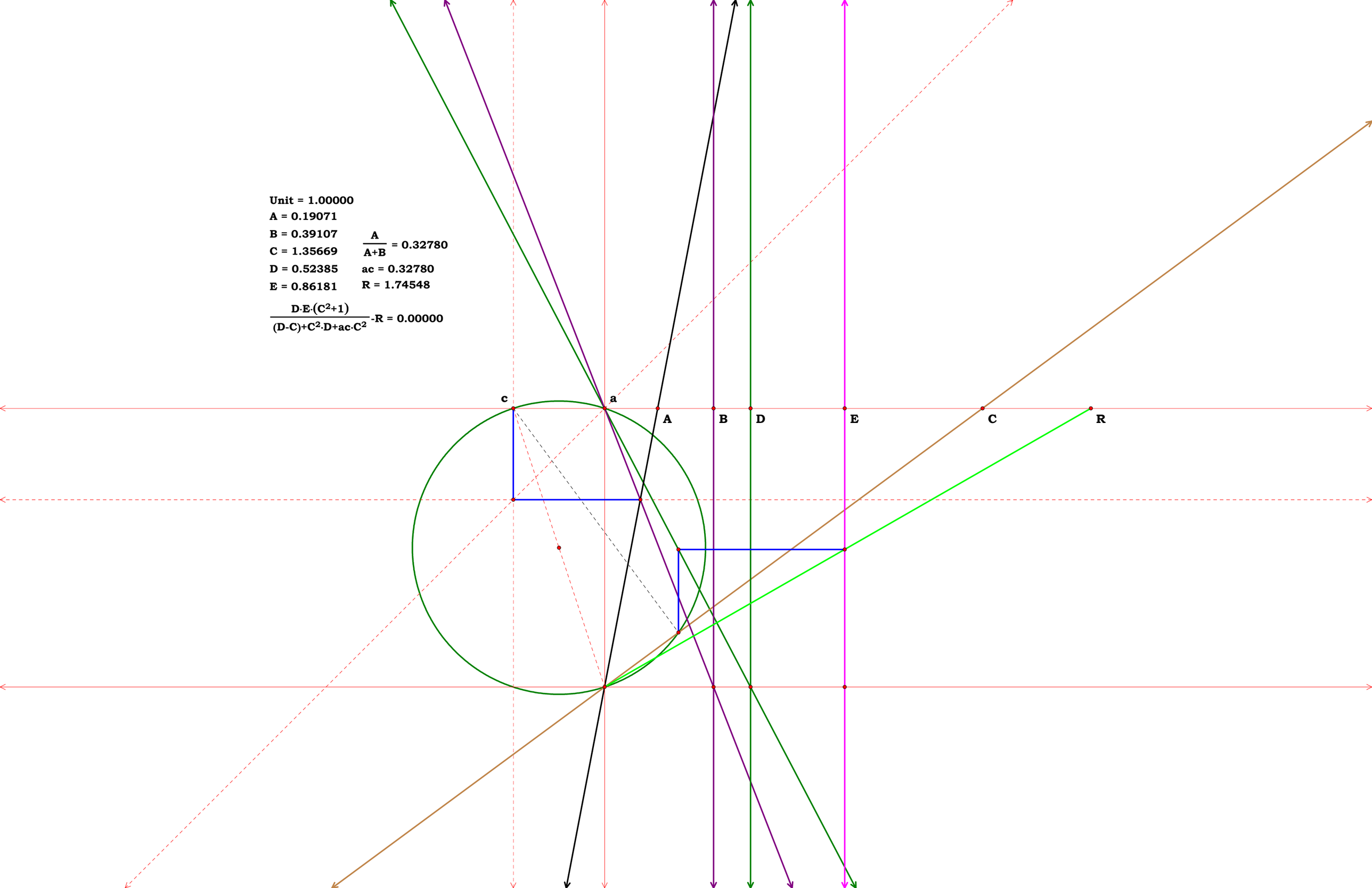
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.35669
D = 0.52385
E = 0.86181

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 1.74548

$\frac{D \cdot E \cdot (C^2+1)}{(D-C)+C^2 \cdot D+ac \cdot C^2} - R = 0.00000$



Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.94872
D = 0.50453
E = 0.70490

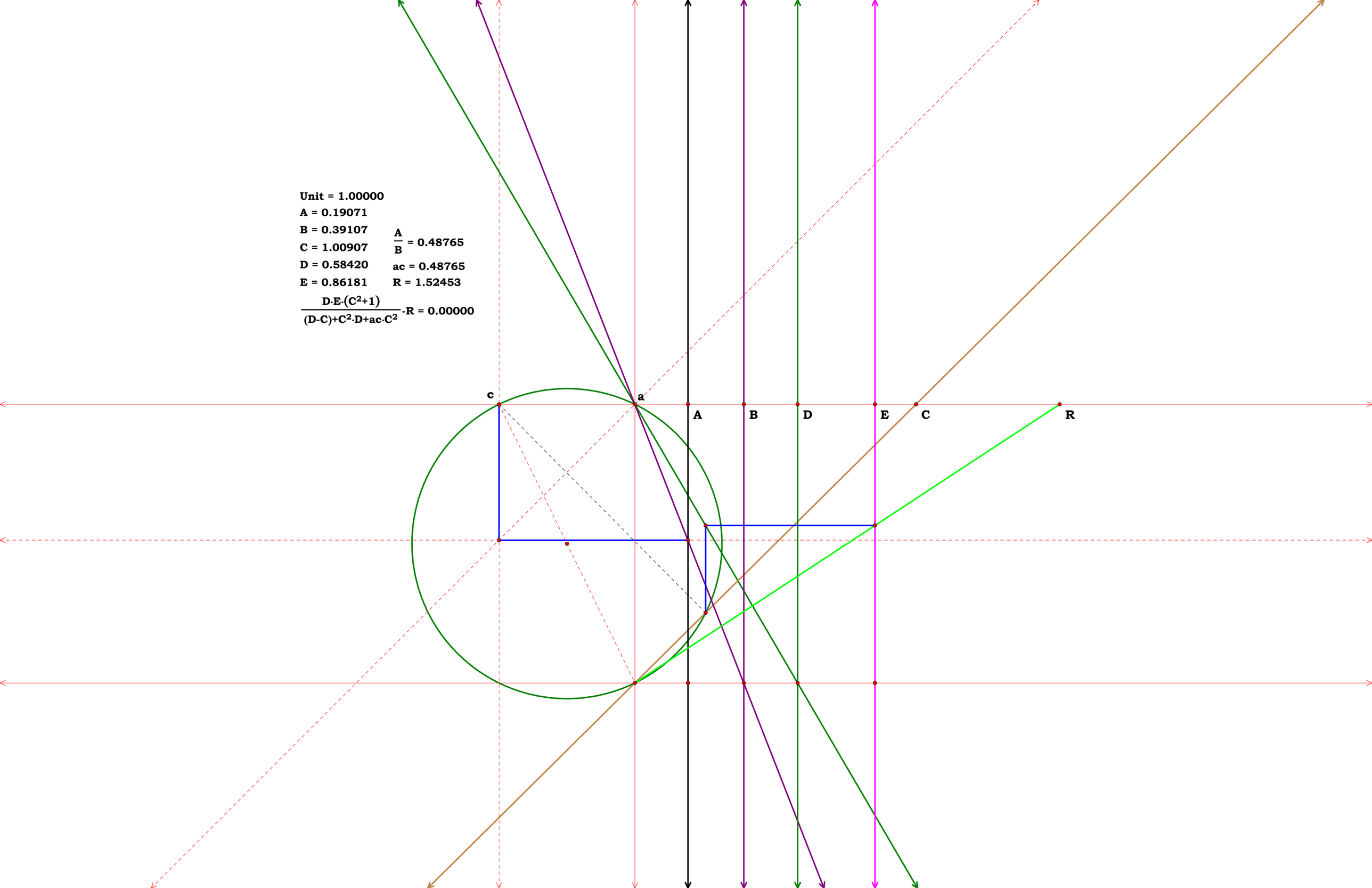
$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 1.16161

$\frac{D \cdot E \cdot (C^2+1)}{(D-C)+C^2 \cdot D+ac \cdot C^2} - R = 0.00000$

c a A B D E C R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.00907
D = 0.58420
E = 0.86181
A/B = 0.48765
ac = 0.48765
R = 1.52453
D·E·(C²+1) / (D-C)+C²·D+ac·C² -R = 0.00000
c
a
A
B
D
E
C
R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 1.00182

D = 0.44177

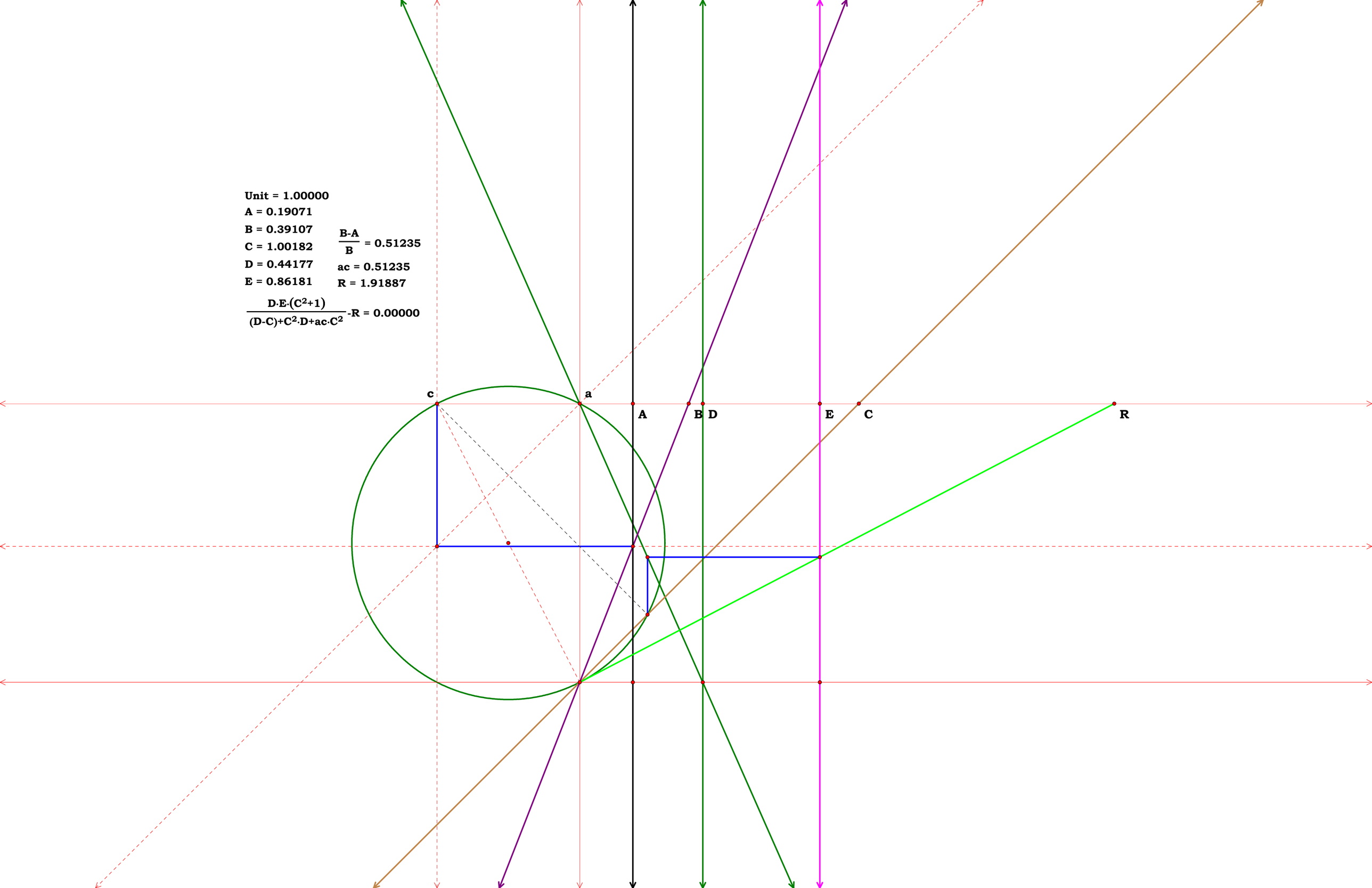
E = 0.86181

$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 1.91887

$\frac{D \cdot E \cdot (C^2+1)}{(D-C)+C^2 \cdot D+ac \cdot C^2} - R = 0.00000$



Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.06459

D = 0.70731

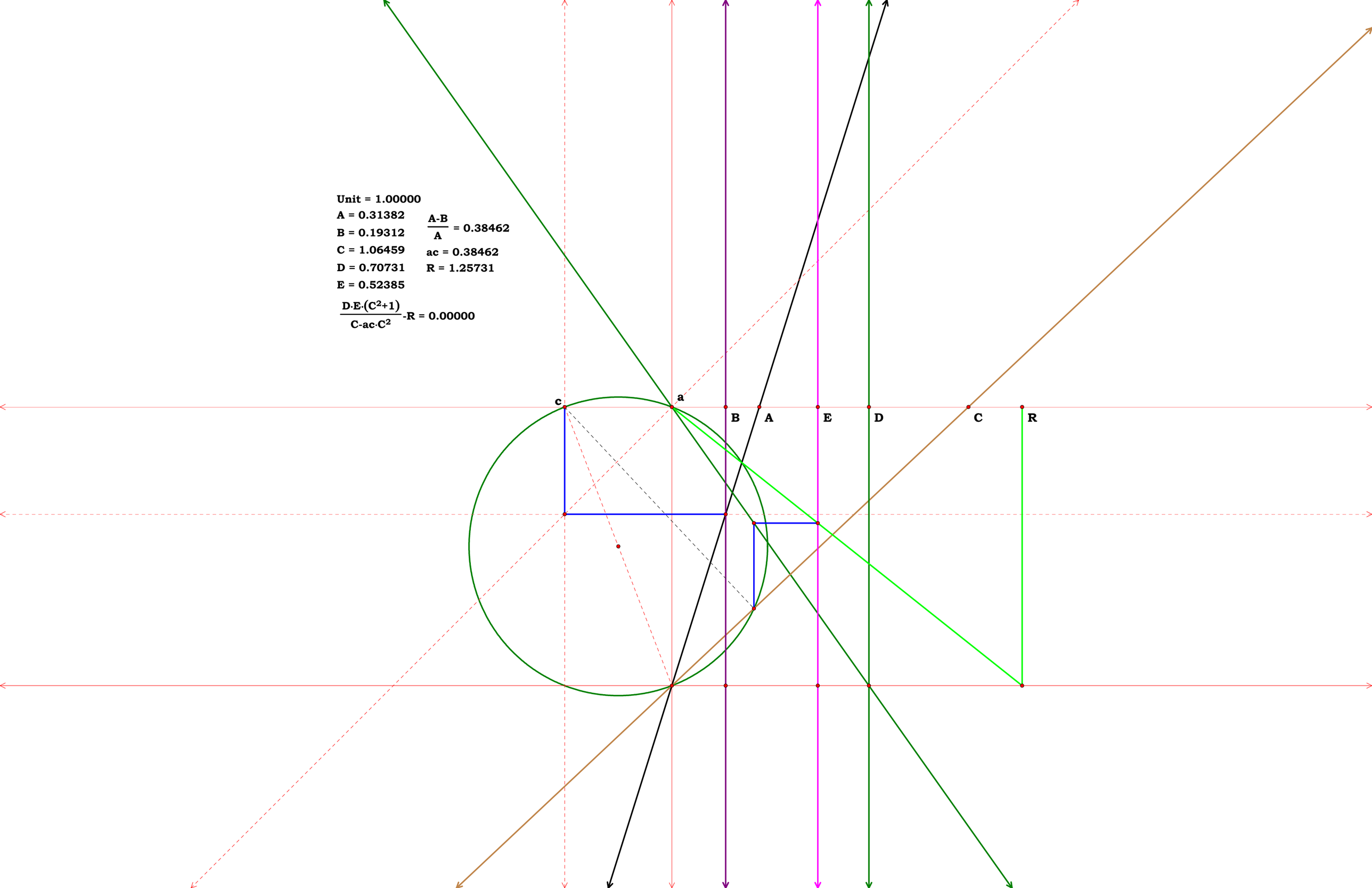
E = 0.52385

$\frac{D \cdot E \cdot (C^2+1)}{C - ac \cdot C^2} - R = 0.00000$

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

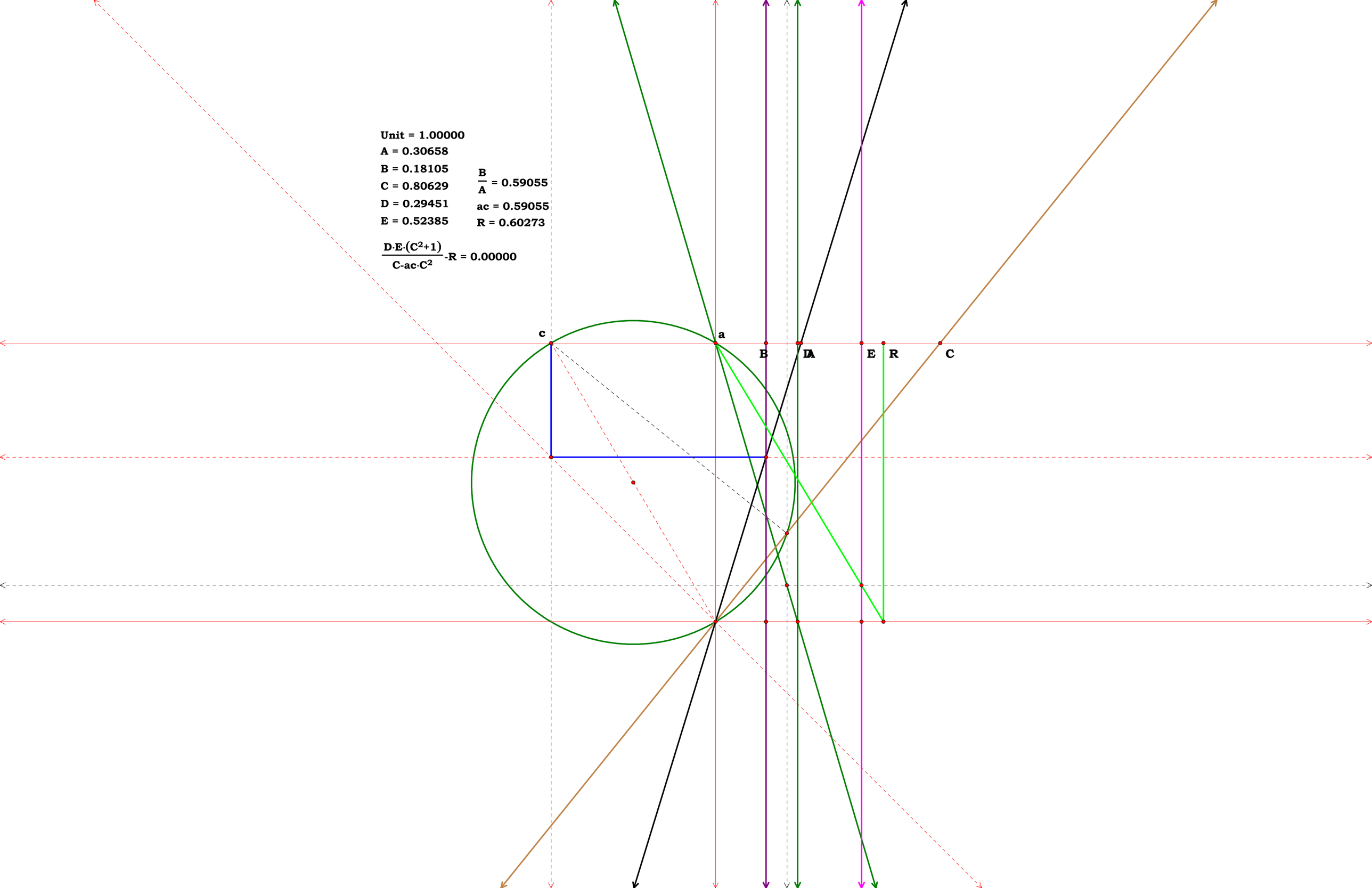
R = 1.25731

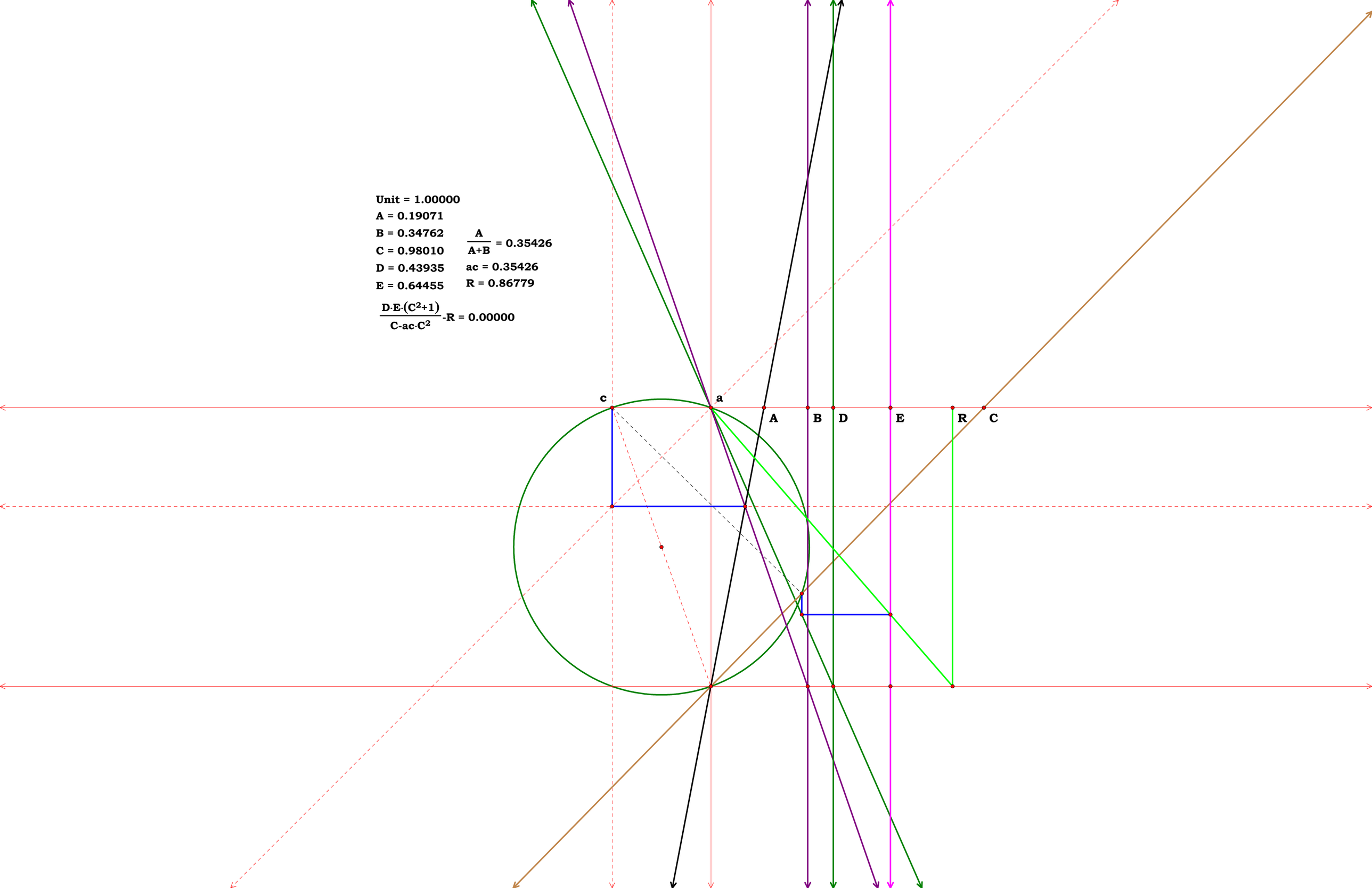


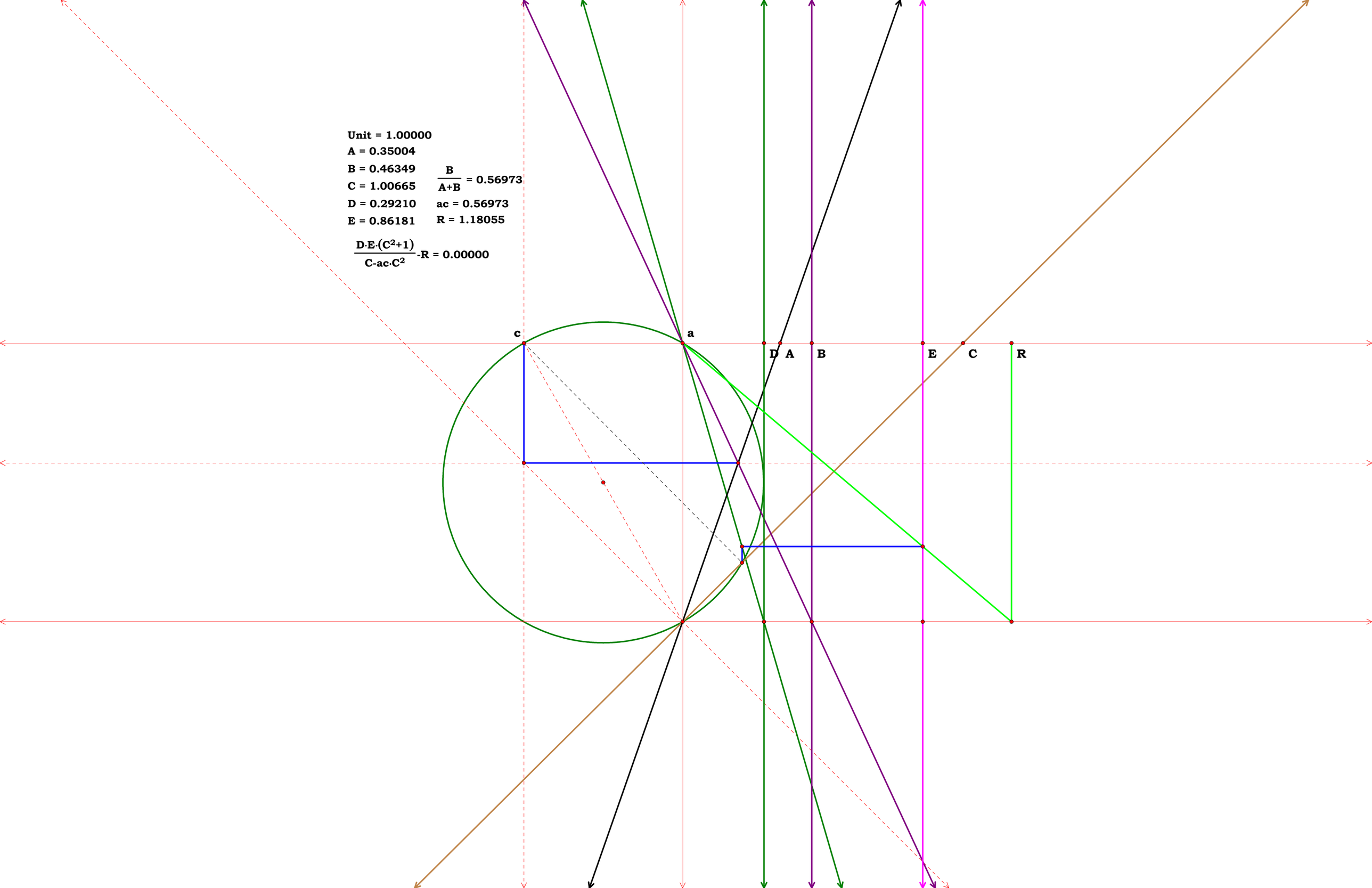
Unit = 1.00000
A = 0.30658
B = 0.18105
C = 0.80629
D = 0.29451
E = 0.52385

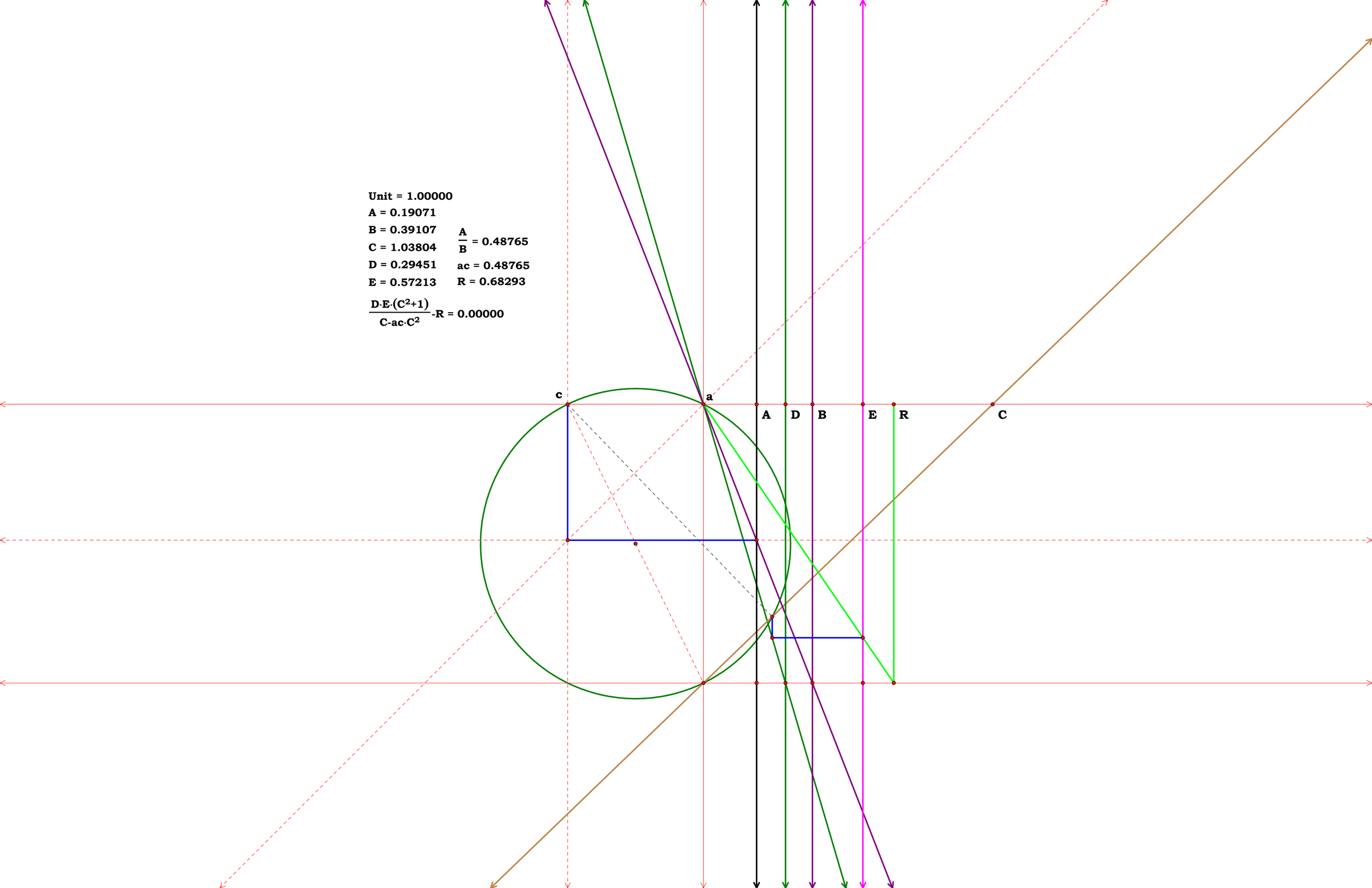
$\frac{B}{A}$ = 0.59055
ac = 0.59055
R = 0.60273

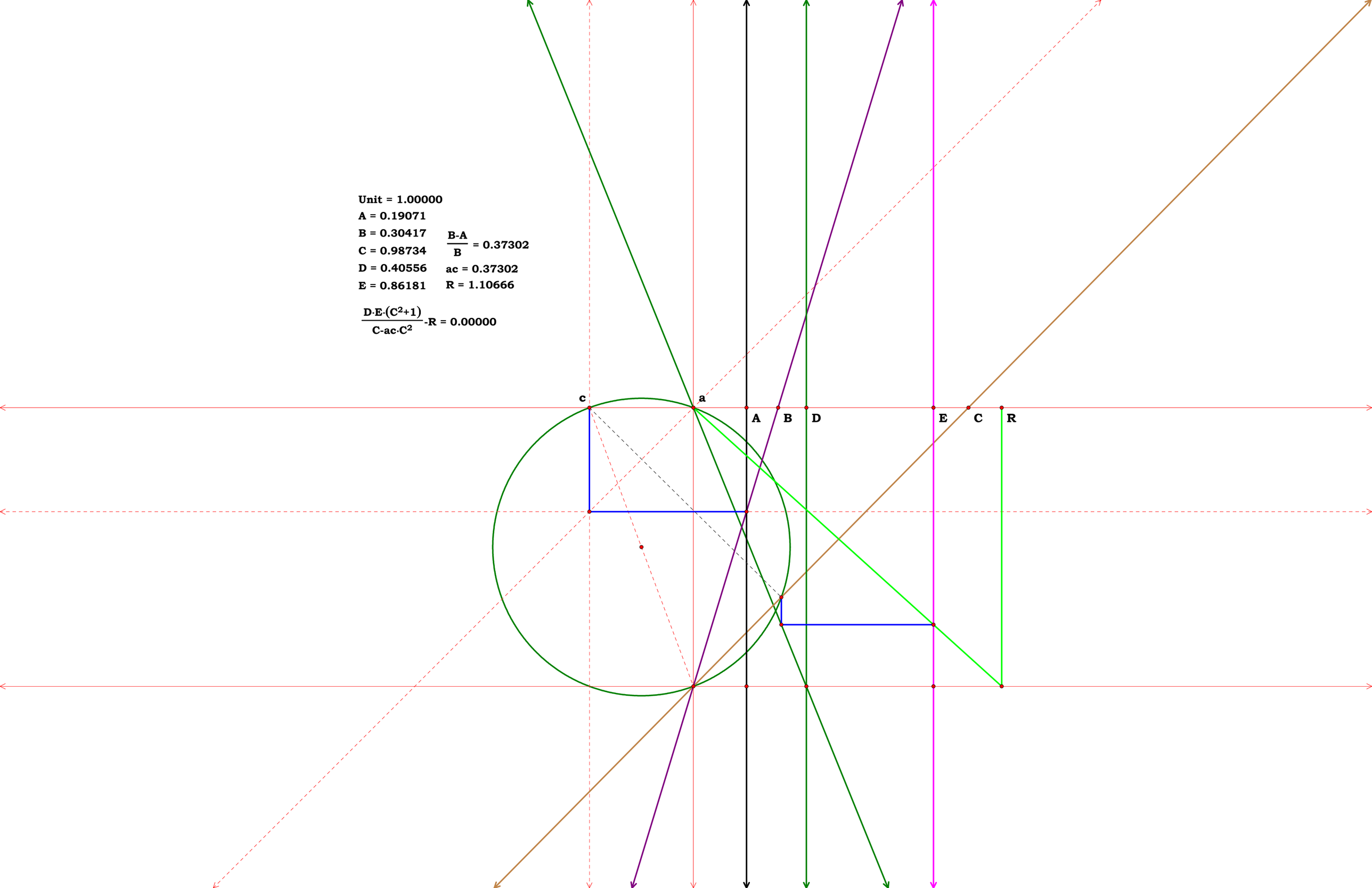
$\frac{D \cdot E \cdot (C^2+1)}{C - ac \cdot C^2} - R$ = 0.00000




Unit = 1.00000
A = 0.19071
B = 0.34762
C = 0.98010
D = 0.43935
E = 0.64455
A/(A+B) = 0.35426
ac = 0.35426
R = 0.86779
D·E·(C²+1)/(C-ac·C²) - R = 0.00000
c
a
A
B
D
E
R
C


Unit = 1.00000
A = 0.35004
B = 0.46349
C = 1.00665
D = 0.29210
E = 0.86181
B / (A+B) = 0.56973
ac = 0.56973
R = 1.18055
D·E·(C²+1) / (C-ac·C²) -R = 0.00000
c
a
D
A
B
E
C
R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.03804
D = 0.29451
E = 0.57213
A/B = 0.48765
ac = 0.48765
R = 0.68293
D·E·(C²+1) / C-ac·C² -R = 0.00000
c
a
A
D
B
E
R
C


Unit = 1.00000
A = 0.19071
B = 0.30417
C = 0.98734
D = 0.40556
E = 0.86181
(B-A)/B = 0.37302
ac = 0.37302
R = 1.10666
D·E·(C²+1)/(C-ac·C²) -R = 0.00000
c
a
A
B
D
E
C
R

Unit = 1.00000

A = 0.34038

B = 0.20036

C = 1.35910

D = 0.67352

E = 0.92699

$\frac{A-B}{A}$ = 0.41135

ac = 0.41135

R = 0.45765

$\frac{2 \cdot D \cdot E \cdot \sqrt{(C+D)^2}}{(C+D) \cdot \left(\sqrt{(C+D)^2 - 4 \cdot D \cdot E \cdot (ac \cdot (C+D) + D \cdot E)} + \sqrt{(C+D)^2}\right)} - R$ = 0.00000

c

a

B

A

R

D

E

C

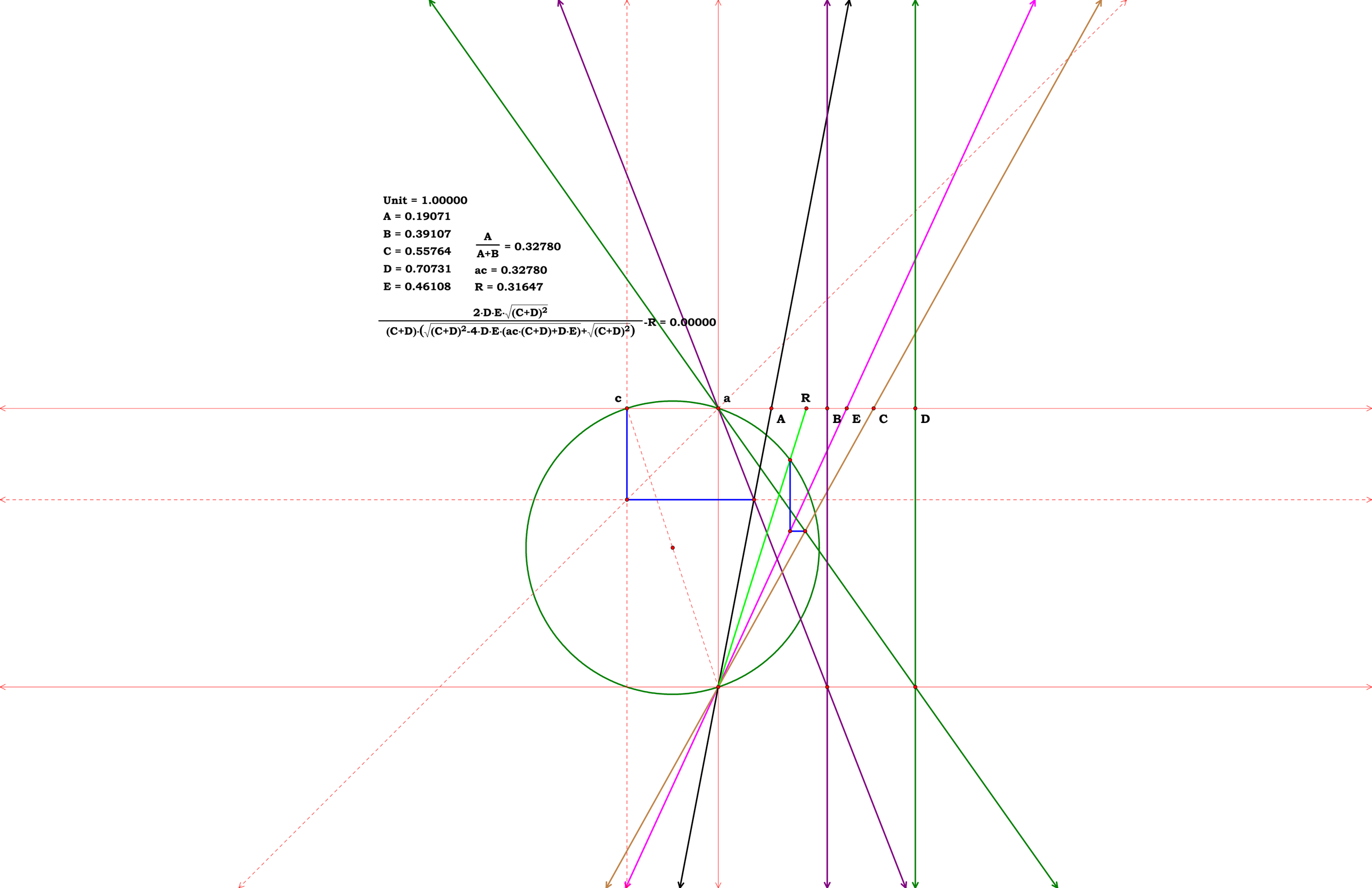
Unit = 1.00000
A = 0.33796
B = 0.23175
C = 0.55764
D = 0.70731
E = 0.27279

$\frac{B}{A} = 0.68571$

ac = 0.68571
R = 0.17956

$$\frac{2\cdot D\cdot E\cdot\sqrt{(C+D)^2}}{(C+D)\cdot\left(\sqrt{(C+D)^2-4\cdot D\cdot E\cdot(ac\cdot(C+D)+D\cdot E)}+\sqrt{(C+D)^2}\right)}-R = 0.00000$$

c
a
R
B
E
A
C
D


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.46108
A/(A+B) = 0.32780
ac = 0.32780
R = 0.31647
2·D·E·√((C+D)²) / ((C+D)·(√((C+D)²-4·D·E·(ac·(C+D)+D·E))+√((C+D)²))) -R = 0.00000
c
a
R
A
B
E
C
D

Unit = 1.00000
A = 0.34038
B = 0.39107
C = 0.59385
D = 0.74352
E = 0.25589

$\frac{B}{A+B} = 0.53465$

ac = 0.53465
R = 0.15948

$$\frac{2\cdot D\cdot E\cdot\sqrt{(C+D)^2}}{(C+D)\cdot\left(\sqrt{(C+D)^2-4\cdot D\cdot E\cdot(ac\cdot(C+D)+D\cdot E)}+\sqrt{(C+D)^2}\right)}-R = 0.00000$$

c a R E A B C D

Unit = 1.00000

A = 0.19071

B = 0.39107 $\frac{A}{B}$ = 0.48765

C = 0.63006 ac = 0.48765

D = 0.76525 R = 0.33992

E = 0.46349

$$\frac{2\cdot D\cdot E\cdot\sqrt{(C+D)^2}}{(C+D)\cdot\left(\sqrt{(C+D)^2-4\cdot D\cdot E\cdot(ac\cdot(C+D)+D\cdot E)}+\sqrt{(C+D)^2}\right)}$$ R = 0.00000

c a R A B E C D

Unit = 1.00000

A = 0.19071

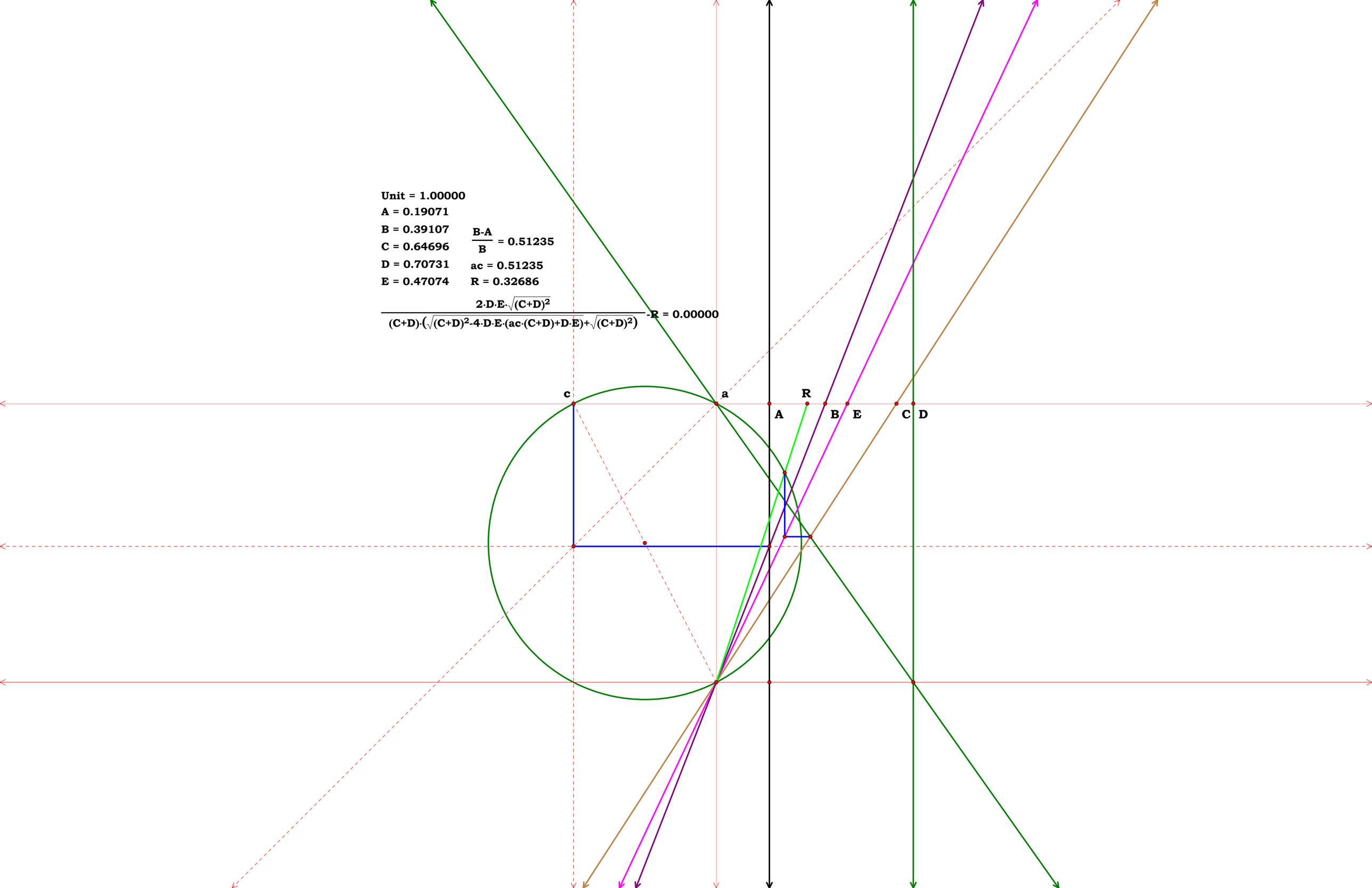
B = 0.39107 $\quad \frac{B-A}{B} = 0.51235$

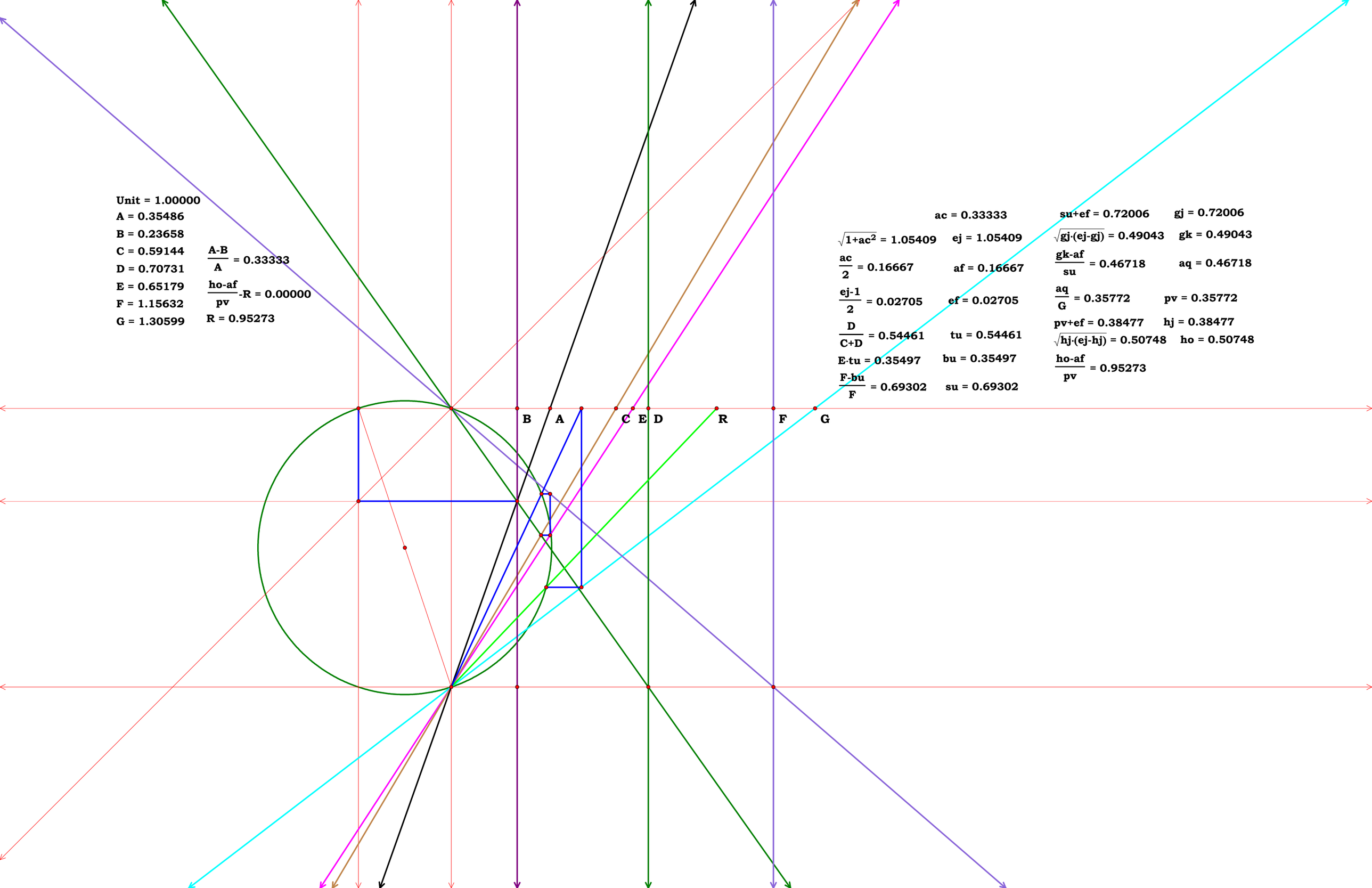
C = 0.64696 $\quad ac = 0.51235$

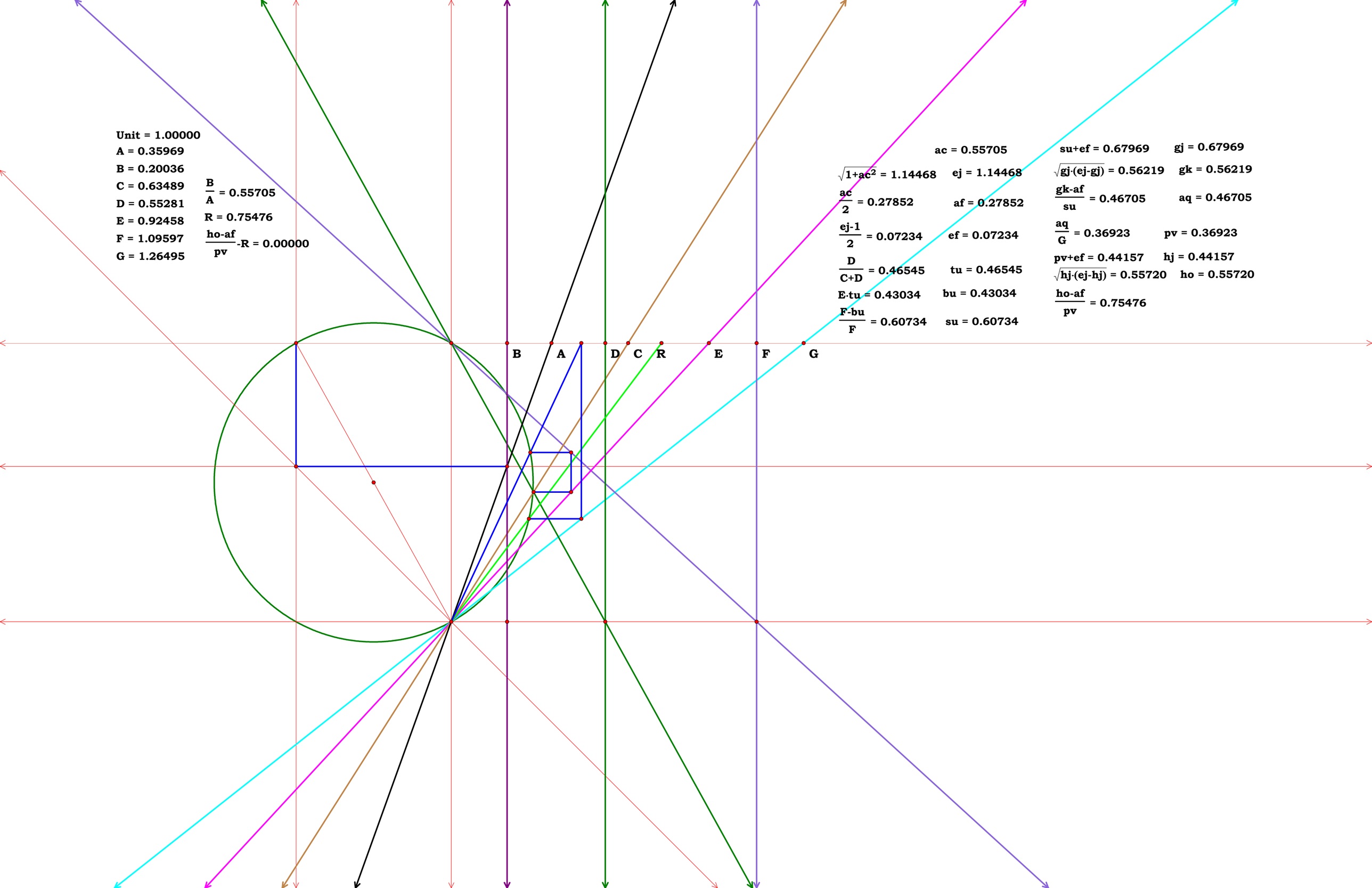
D = 0.70731 $\quad R = 0.32686$

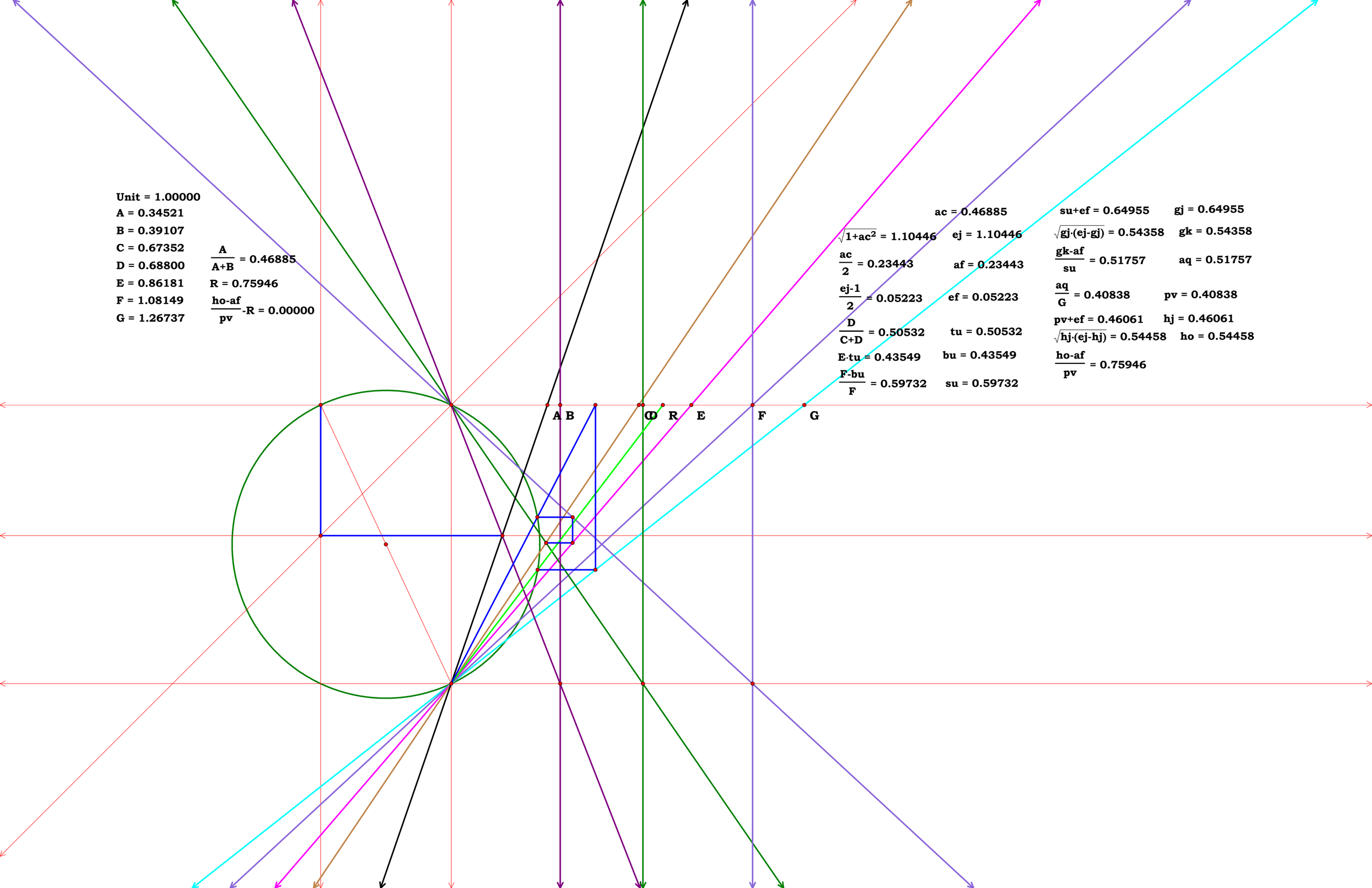
E = 0.47074

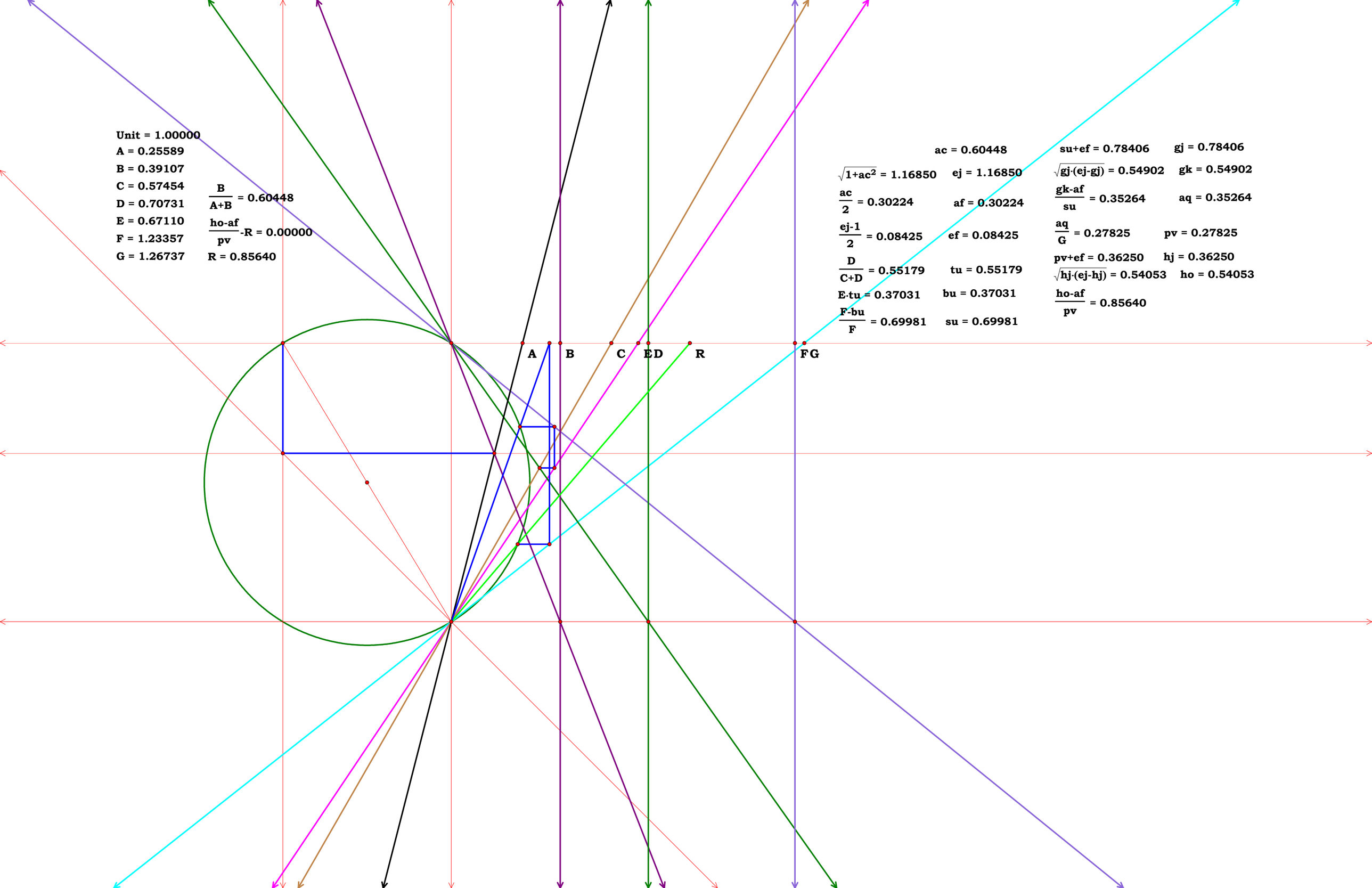
$$\frac{2 \cdot D \cdot E \cdot \sqrt{(C+D)^2}}{(C+D) \cdot \left(\sqrt{(C+D)^2 - 4 \cdot D \cdot E \cdot (ac \cdot (C+D) + D \cdot E)} + \sqrt{(C+D)^2}\right)} - R = 0.00000$$

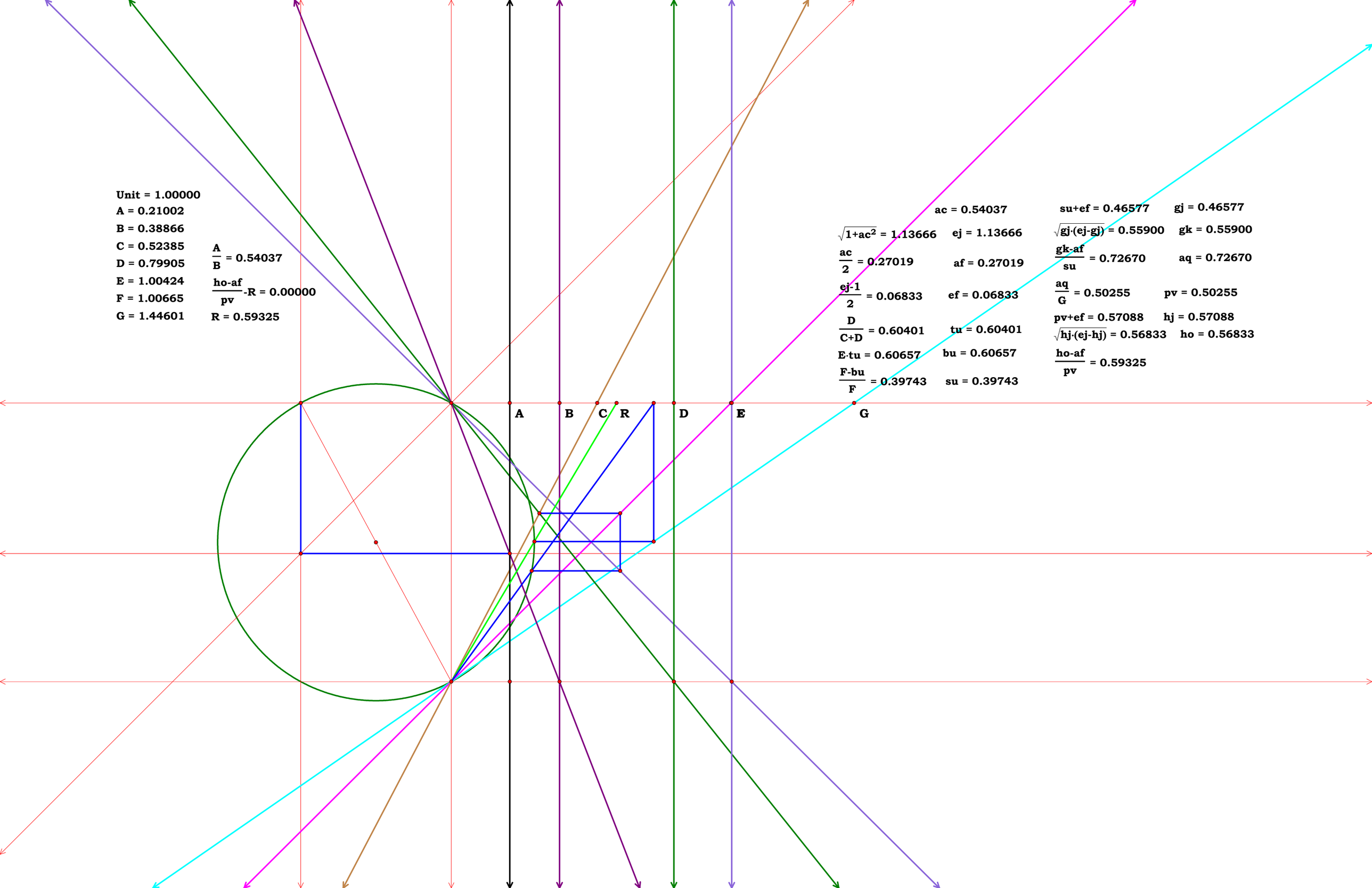


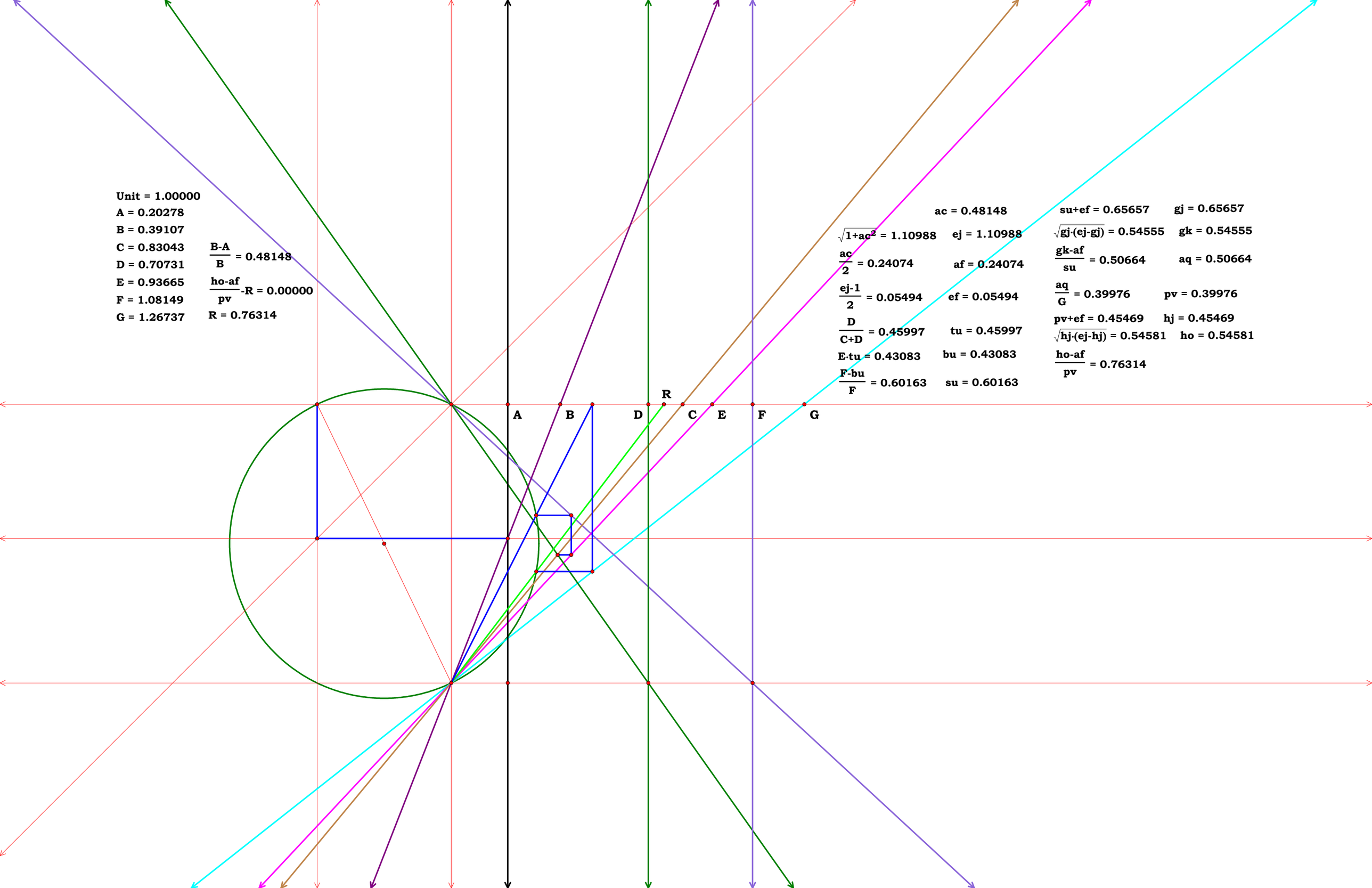

Unit = 1.00000
A = 0.35486
B = 0.23658
C = 0.59144
D = 0.70731
E = 0.65179
F = 1.15632
G = 1.30599
(A-B)/A = 0.33333
ho-af/pv-R = 0.00000
R = 0.95273
ac = 0.33333
√(1+ac²) = 1.05409
ej = 1.05409
ac/2 = 0.16667
af = 0.16667
ej-1/2 = 0.02705
ef = 0.02705
D/(C+D) = 0.54461
tu = 0.54461
E·tu = 0.35497
bu = 0.35497
F-bu/F = 0.69302
su = 0.69302
su+ef = 0.72006
gj = 0.72006
√(gj·(ej-gj)) = 0.49043
gk = 0.49043
gk-af/su = 0.46718
aq = 0.46718
aq/G = 0.35772
pv = 0.35772
pv+ef = 0.38477
hj = 0.38477
√(hj·(ej-hj)) = 0.50748
ho = 0.50748
ho-af/pv = 0.95273
B
A
C
E
D
R
F
G

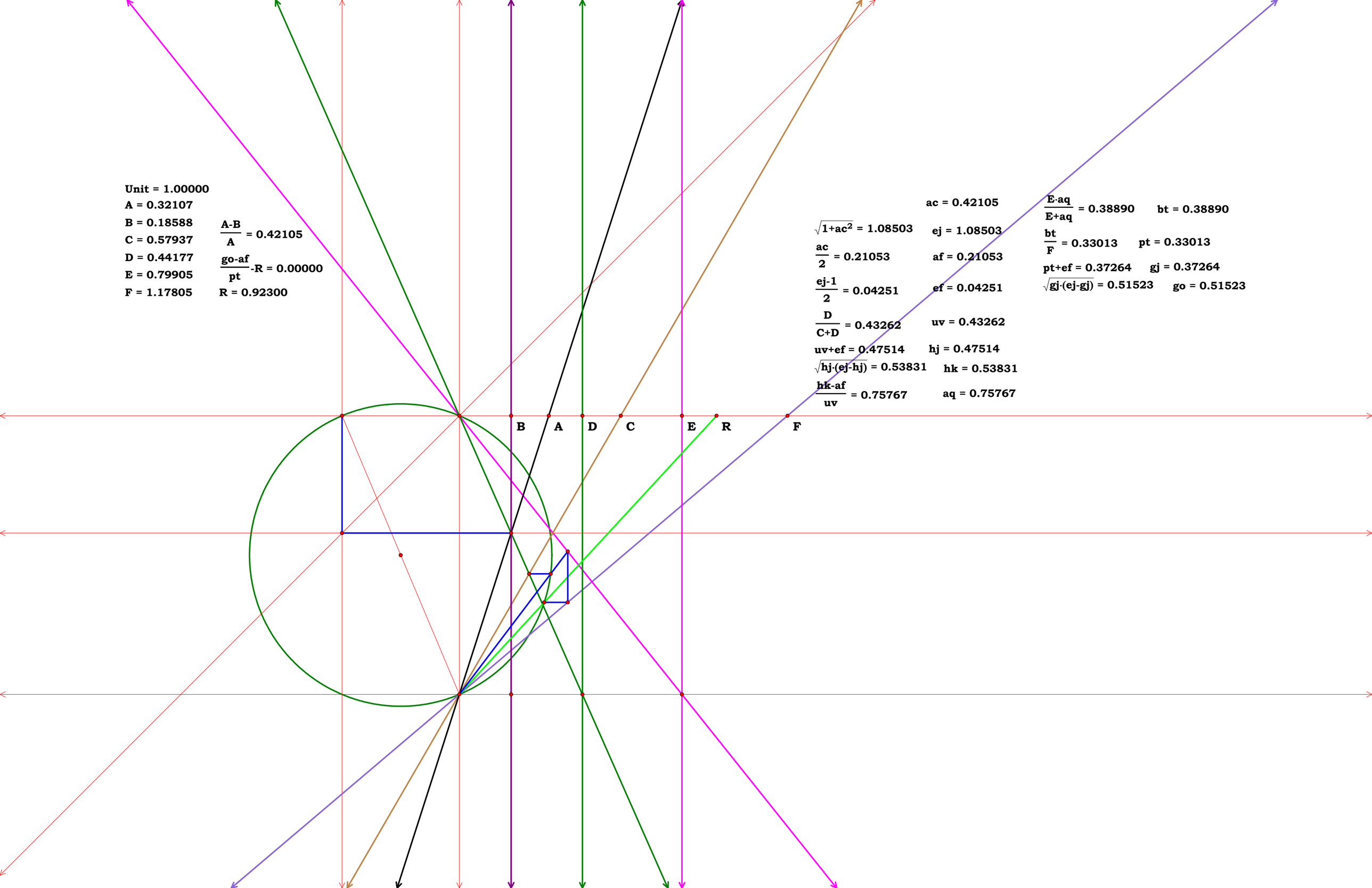

Unit = 1.00000
A = 0.35969
B = 0.20036
C = 0.63489
D = 0.55281
E = 0.92458
F = 1.09597
G = 1.26495
B/A = 0.55705
R = 0.75476
(ho-af)/pv-R = 0.00000
ac = 0.55705
√(1+ac²) = 1.14468
ej = 1.14468
ac/2 = 0.27852
af = 0.27852
(ej-1)/2 = 0.07234
ef = 0.07234
D/(C+D) = 0.46545
tu = 0.46545
E·tu = 0.43034
bu = 0.43034
(F-bu)/F = 0.60734
su = 0.60734
su+ef = 0.67969
gj = 0.67969
√(gj·(ej-gj)) = 0.56219
gk = 0.56219
(gk-af)/su = 0.46705
aq = 0.46705
aq/G = 0.36923
pv = 0.36923
pv+ef = 0.44157
hj = 0.44157
√(hj·(ej-hj)) = 0.55720
ho = 0.55720
(ho-af)/pv = 0.75476
B
A
D
C
R
E
F
G


Unit = 1.00000
A = 0.34521
B = 0.39107
C = 0.67352
D = 0.68800
E = 0.86181
F = 1.08149
G = 1.26737
A/(A+B) = 0.46885
R = 0.75946
ho-af/pv-R = 0.00000
ac = 0.46885
su+ef = 0.64955
gj = 0.64955
√(1+ac²) = 1.10446
ej = 1.10446
√(gj·(ej-gj)) = 0.54358
gk = 0.54358
ac/2 = 0.23443
af = 0.23443
gk-af/su = 0.51757
aq = 0.51757
ej-1/2 = 0.05223
ef = 0.05223
aq/G = 0.40838
pv = 0.40838
D/(C+D) = 0.50532
tu = 0.50532
pv+ef = 0.46061
hj = 0.46061
E·tu = 0.43549
bu = 0.43549
√(hj·(ej-hj)) = 0.54458
ho = 0.54458
F-bu/F = 0.59732
su = 0.59732
ho-af/pv = 0.75946
A
B
C
D
R
E
F
G


Unit = 1.00000
A = 0.25589
B = 0.39107
C = 0.57454
D = 0.70731
E = 0.67110
F = 1.23357
G = 1.26737
B / (A+B) = 0.60448
ho-af / pv -R = 0.00000
R = 0.85640
ac = 0.60448
su+ef = 0.78406
gj = 0.78406
√(1+ac²) = 1.16850
ej = 1.16850
√(gj·(ej-gj)) = 0.54902
gk = 0.54902
ac / 2 = 0.30224
af = 0.30224
gk-af / su = 0.35264
aq = 0.35264
ej-1 / 2 = 0.08425
ef = 0.08425
aq / G = 0.27825
pv = 0.27825
D / C+D = 0.55179
tu = 0.55179
pv+ef = 0.36250
hj = 0.36250
E·tu = 0.37031
bu = 0.37031
√(hj·(ej-hj)) = 0.54053
ho = 0.54053
F-bu / F = 0.69981
su = 0.69981
ho-af / pv = 0.85640
A
B
C
E
D
R
F
G


Unit = 1.00000
A = 0.21002
B = 0.38866
C = 0.52385
D = 0.79905
E = 1.00424
F = 1.00665
G = 1.44601
A/B = 0.54037
ho-af/pv-R = 0.00000
R = 0.59325
ac = 0.54037
su+ef = 0.46577
gj = 0.46577
√1+ac² = 1.13666
ej = 1.13666
√gj·(ej-gj) = 0.55900
gk = 0.55900
ac/2 = 0.27019
af = 0.27019
gk-af/su = 0.72670
aq = 0.72670
ej-1/2 = 0.06833
ef = 0.06833
aq/G = 0.50255
pv = 0.50255
D/C+D = 0.60401
tu = 0.60401
pv+ef = 0.57088
hj = 0.57088
E·tu = 0.60657
bu = 0.60657
√hj·(ej-hj) = 0.56833
ho = 0.56833
F-bu/F = 0.39743
su = 0.39743
ho-af/pv = 0.59325
A
B
C
R
D
E
G


Unit = 1.00000
A = 0.20278
B = 0.39107
C = 0.83043
D = 0.70731
E = 0.93665
F = 1.08149
G = 1.26737
B-A / B = 0.48148
ho-af / pv -R = 0.00000
R = 0.76314
ac = 0.48148
√1+ac² = 1.10988
ej = 1.10988
ac / 2 = 0.24074
af = 0.24074
ej-1 / 2 = 0.05494
ef = 0.05494
D / C+D = 0.45997
tu = 0.45997
E·tu = 0.43083
bu = 0.43083
F-bu / F = 0.60163
su = 0.60163
su+ef = 0.65657
gj = 0.65657
√gj·(ej-gj) = 0.54555
gk = 0.54555
gk-af / su = 0.50664
aq = 0.50664
aq / G = 0.39976
pv = 0.39976
pv+ef = 0.45469
hj = 0.45469
√hj·(ej-hj) = 0.54581
ho = 0.54581
ho-af / pv = 0.76314
A
B
D
R
C
E
F
G


Unit = 1.00000
A = 0.32107
B = 0.18588
C = 0.57937
D = 0.44177
E = 0.79905
F = 1.17805
(A-B)/A = 0.42105
(go-af)/pt-R = 0.00000
R = 0.92300
ac = 0.42105
√(1+ac²) = 1.08503
ej = 1.08503
ac/2 = 0.21053
af = 0.21053
(ej-1)/2 = 0.04251
ef = 0.04251
D/(C+D) = 0.43262
uv = 0.43262
uv+ef = 0.47514
hj = 0.47514
√(hj·(ej-hj)) = 0.53831
hk = 0.53831
(hk-af)/uv = 0.75767
aq = 0.75767
(E·aq)/(E+aq) = 0.38890
bt = 0.38890
bt/F = 0.33013
pt = 0.33013
pt+ef = 0.37264
gj = 0.37264
√(gj·(ej-gj)) = 0.51523
go = 0.51523
B
A
D
C
E
R
F

Unit = 1.00000
A = 0.38866
B = 0.13519 $\frac{B}{A}$ = 0.34783
C = 0.64696 $\frac{go-af}{pt}$-R = 0.00000
D = 0.54316
E = 1.22392 R = 0.80209
F = 1.08149

ac = 0.34783

$\sqrt{1+ac^2}$ = 1.05876 ej = 1.05876

$\frac{ac}{2}$ = 0.17391 af = 0.17391

$\frac{ej-1}{2}$ = 0.02938 ef = 0.02938

$\frac{D}{C+D}$ = 0.45639 uv = 0.45639

uv+ef = 0.48577 hj = 0.48577

$\sqrt{hj\cdot(ej-hj)}$ = 0.52758 hk = 0.52758

$\frac{hk-af}{uv}$ = 0.77493 aq = 0.77493

$\frac{E\cdot aq}{E+aq}$ = 0.47450 bt = 0.47450

$\frac{bt}{F}$ = 0.43875 pt = 0.43875

pt+ef = 0.46813 gj = 0.46813

$\sqrt{gj\cdot(ej-gj)}$ = 0.52583 go = 0.52583

B A D C R F E

Unit = 1.00000
A = 0.28968
B = 0.41280
C = 0.49488
D = 0.56971
E = 1.08149
F = 1.08149

$\frac{A}{A+B}$ = 0.41237

$\frac{go-af}{pt}$-R = 0.00000

R = 0.86898

ac = 0.41237

$\sqrt{1+ac^2}$ = 1.08169 ej = 1.08169

$\frac{ac}{2}$ = 0.20619 af = 0.20619

$\frac{ej-1}{2}$ = 0.04084 ef = 0.04084

$\frac{D}{C+D}$ = 0.53515 uv = 0.53515

uv+ef = 0.57599 hj = 0.57599

$\sqrt{hj\cdot(ej-hj)}$ = 0.53970 hk = 0.53970

$\frac{hk-af}{uv}$ = 0.62322 aq = 0.62322

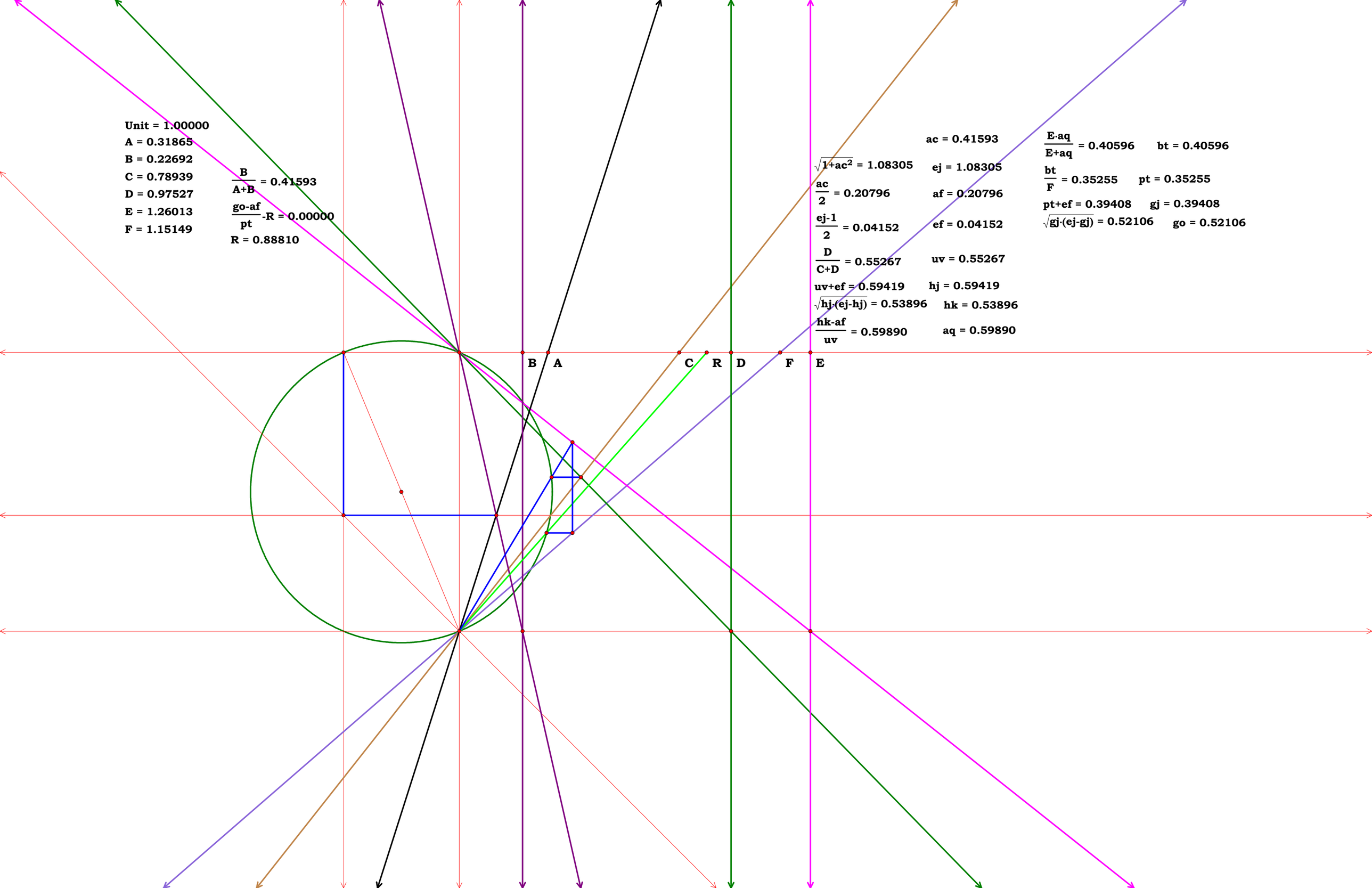
$\frac{E\cdot aq}{E+aq}$ = 0.39538 bt = 0.39538

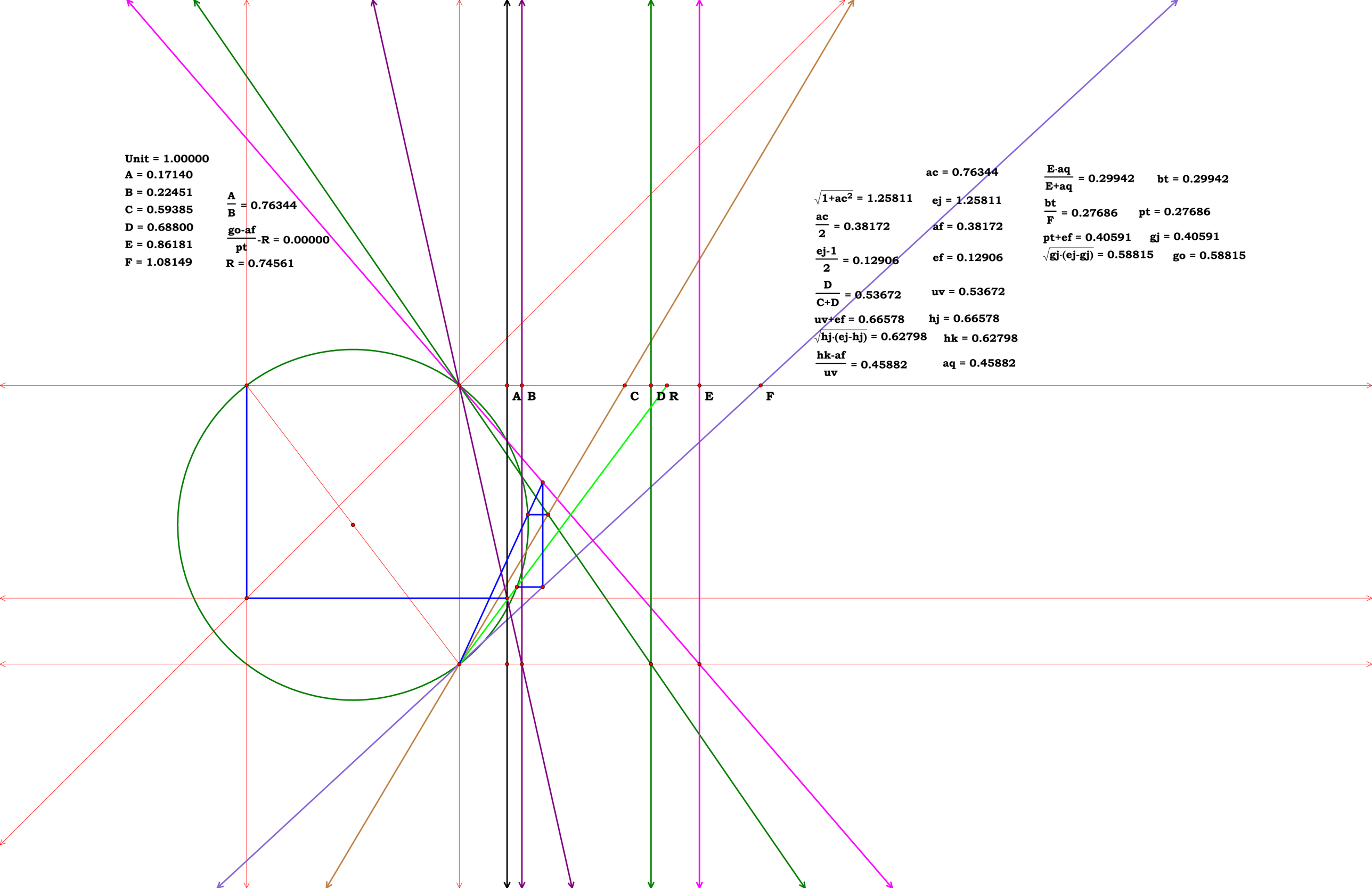
$\frac{bt}{F}$ = 0.36559 pt = 0.36559

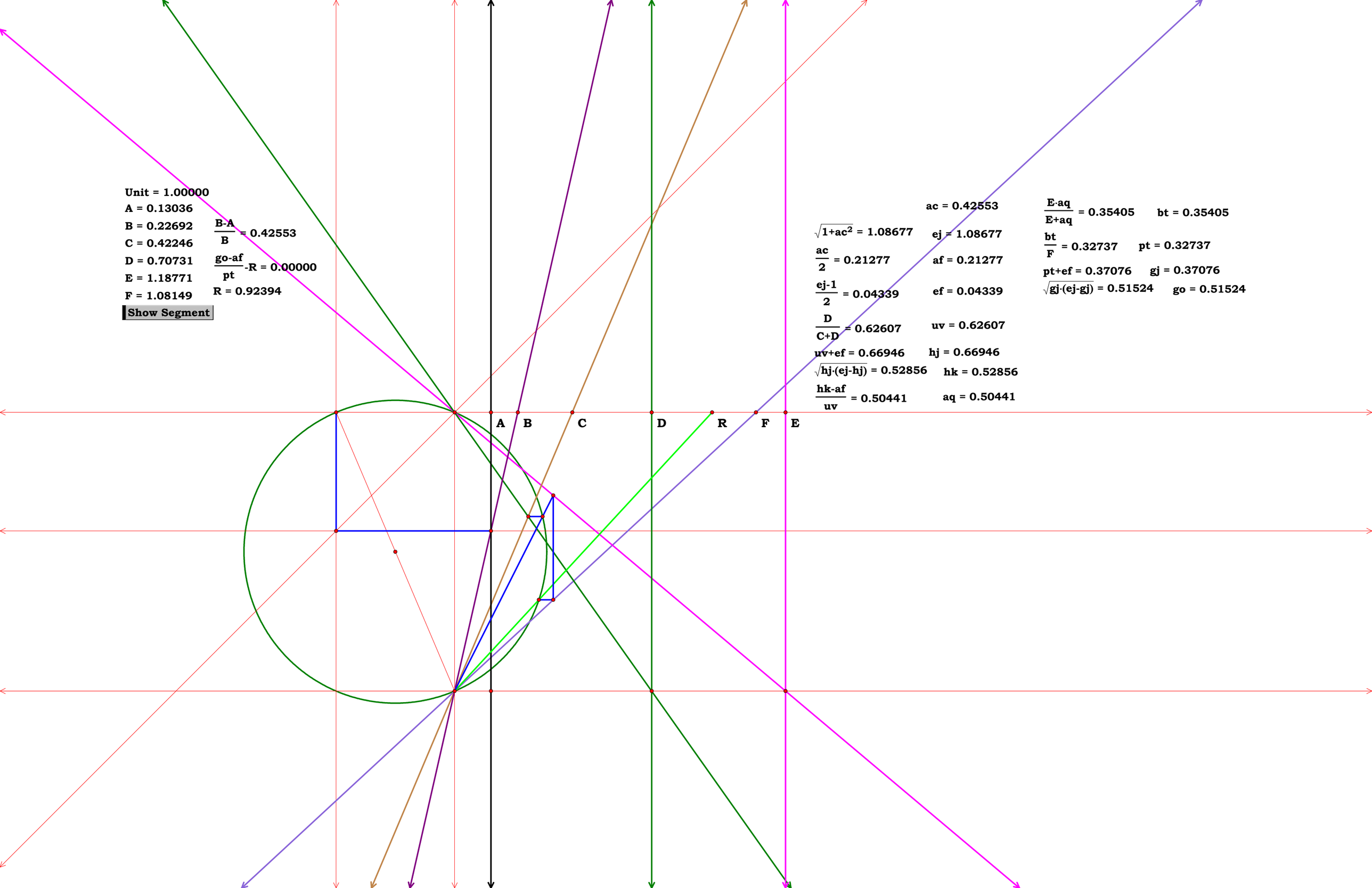
pt+ef = 0.40643 gj = 0.40643

$\sqrt{gj\cdot(ej-gj)}$ = 0.52388 go = 0.52388

A B C D R E


Unit = 1.00000
A = 0.31865
B = 0.22692
C = 0.78939
D = 0.97527
E = 1.26013
F = 1.15149
B/(A+B) = 0.41593
(go-af)/pt -R = 0.00000
R = 0.88810
ac = 0.41593
√(1+ac²) = 1.08305
ej = 1.08305
ac/2 = 0.20796
af = 0.20796
(ej-1)/2 = 0.04152
ef = 0.04152
D/(C+D) = 0.55267
uv = 0.55267
uv+ef = 0.59419
hj = 0.59419
√(hj·(ej-hj)) = 0.53896
hk = 0.53896
(hk-af)/uv = 0.59890
aq = 0.59890
E·aq/(E+aq) = 0.40596
bt = 0.40596
bt/F = 0.35255
pt = 0.35255
pt+ef = 0.39408
gj = 0.39408
√(gj·(ej-gj)) = 0.52106
go = 0.52106
B
A
C
R
D
F
E


Unit = 1.00000
A = 0.17140
B = 0.22451
C = 0.59385
D = 0.68800
E = 0.86181
F = 1.08149
A/B = 0.76344
(go-af)/pt -R = 0.00000
R = 0.74561
ac = 0.76344
√(1+ac²) = 1.25811
ej = 1.25811
ac/2 = 0.38172
af = 0.38172
(ej-1)/2 = 0.12906
ef = 0.12906
D/(C+D) = 0.53672
uv = 0.53672
uv+ef = 0.66578
hj = 0.66578
√(hj·(ej-hj)) = 0.62798
hk = 0.62798
(hk-af)/uv = 0.45882
aq = 0.45882
E·aq/(E+aq) = 0.29942
bt = 0.29942
bt/F = 0.27686
pt = 0.27686
pt+ef = 0.40591
gj = 0.40591
√(gj·(ej-gj)) = 0.58815
go = 0.58815
A
B
C
D
R
E
F


Unit = 1.00000
A = 0.13036
B = 0.22692
C = 0.42246
D = 0.70731
E = 1.18771
F = 1.08149
Show Segment
B-A / B = 0.42553
go-af / pt -R = 0.00000
R = 0.92394
ac = 0.42553
√1+ac² = 1.08677
ej = 1.08677
ac / 2 = 0.21277
af = 0.21277
ej-1 / 2 = 0.04339
ef = 0.04339
D / C+D = 0.62607
uv = 0.62607
uv+ef = 0.66946
hj = 0.66946
√hj·(ej-hj) = 0.52856
hk = 0.52856
hk-af / uv = 0.50441
aq = 0.50441
E·aq / E+aq = 0.35405
bt = 0.35405
bt / F = 0.32737
pt = 0.32737
pt+ef = 0.37076
gj = 0.37076
√gj·(ej-gj) = 0.51524
go = 0.51524
A
B
C
D
R
F
E

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 0.70490

D = 0.51660

E = 0.90285

F = 1.24323

$\frac{A-B}{A} = 0.38462$

$ac = 0.38462$

$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)-(F\cdot(C+D)-2\cdot D\cdot E)^2}-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)\cdot(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2\cdot((C\cdot F-D\cdot E)+D\cdot F)}}-R = 0.00000$

R = 0.44378

c

a

B

A

R

D

C

E

F

Unit = 1.00000

A = 0.31865

B = 0.19554

C = 0.69283

D = 0.53592

E = 0.86181

F = 1.08149

$\frac{B}{A}$ = 0.61364

ac = 0.61364

$$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)-(F\cdot(C+D)-2\cdot D\cdot E)^2}-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)\cdot(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2}\cdot((C\cdot F-D\cdot E)+D\cdot F)}-R = 0.00000$$

R = 0.39798

c a B A R D C E F

Unit = 1.00000
A = 0.19071
B = 0.37659
C = 0.64213
D = 0.70973
E = 0.93906
F = 1.37117

$\frac{A}{A+B} = 0.33617$

ac = 0.33617

R = 0.53146

$$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)}-(F\cdot(C+D)-2\cdot D\cdot E)^2-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2}\cdot((C\cdot F-D\cdot E)+D\cdot F)}-R = 0.00000$$

c a A B R C D E F

Unit = 1.00000

A = 0.22451

B = 0.35004

C = 0.55764 $\frac{B}{A+B}$ = 0.60924

D = 0.64938 ac = 0.60924

E = 0.81353 R = 0.39794

F = 1.26495

$$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)}-(F\cdot(C+D)-2\cdot D\cdot E)^2-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)\cdot(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2}\cdot((C\cdot F-D\cdot E)+D\cdot F)}-R = 0.00000$$

c a A B R C D E F

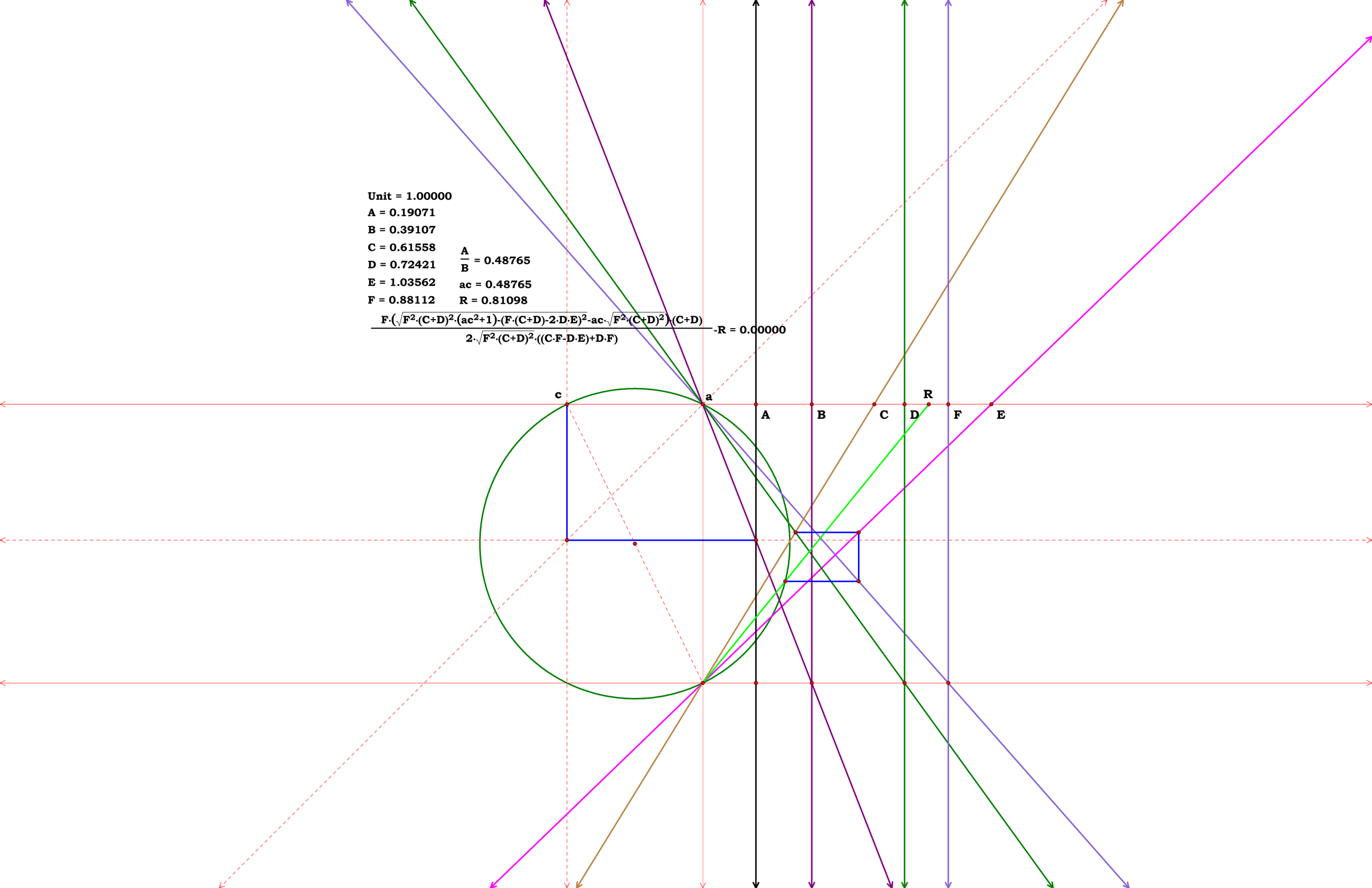
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.61558
D = 0.72421
E = 1.03562
F = 0.88112

$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 0.81098

$$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)-(F\cdot(C+D)-2\cdot D\cdot E)^2}-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)\cdot(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2\cdot((C\cdot F-D\cdot E)+D\cdot F)}}-R = 0.00000$$



Unit = 1.00000
A = 0.19071
B = 0.43694
C = 1.32772
D = 0.70731
E = 0.95354
F = 1.08149

$\frac{B-A}{B} = 0.56354$

ac = 0.56354

R = 0.37278

$$\frac{F\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot(ac^2+1)}-(F\cdot(C+D)-2\cdot D\cdot E)^2-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)\cdot(C+D)}{2\cdot\sqrt{F^2\cdot(C+D)^2}\cdot((C\cdot F-D\cdot E)+D\cdot F)}-R = 0.00000$$

c a R A B D E F C

Unit = 1.00000
A = 0.25830
B = 0.15691
C = 0.55764
D = 0.67593 $\frac{A-B}{A}$ = 0.39252
E = 1.07183 ac = 0.39252
F = 1.60775 R = 0.33712
G = 1.21667 $\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-D\cdot E)-ac\cdot G^2\cdot((C+D)\cdot F-D\cdot E)^2}{((C+D)\cdot F-D\cdot E)^2\cdot G^2+F^2\cdot(C+D)^2}$ -R = 0.00000

c a B A R C D E G F

Unit = 1.00000

A = 0.31865

B = 0.12794

C = 0.99217

D = 0.70731

E = 0.61317

F = 1.08149

G = 1.12011

$\frac{B}{A} = 0.40152$

ac = 0.40152

R = 0.32425

$$\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-(D\cdot E))-ac\cdot G^2\cdot((C+D)\cdot F-(D\cdot E))^2}{((C+D)\cdot F-(D\cdot E))^2\cdot G^2+F^2\cdot(C+D)^2}-R = 0.00000$$

c a B R E D C F G

Unit = 1.00000
A = 0.19071
B = 0.42970
C = 0.55764
D = 0.52385
E = 0.95354
F = 1.10804
G = 1.26737

$\frac{A}{A+B} = 0.30739$

ac = 0.30739

R = 0.36939

$$\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-(D\cdot E))-ac\cdot G^2\cdot((C+D)\cdot F-(D\cdot E))^2}{((C+D)\cdot F-(D\cdot E))^2\cdot G^2+F^2\cdot(C+D)^2}-R = 0.00000$$

c a A R B DC E F G

Unit = 1.00000
A = 0.33072
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.88595
F = 0.94872
G = 1.66568

$\frac{B}{A+B} = 0.54181$

ac = 0.54181

R = 0.27713

$$\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-(D\cdot E))-ac\cdot G^2\cdot((C+D)\cdot F-(D\cdot E))^2}{((C+D)\cdot F-(D\cdot E))^2\cdot G^2+F^2\cdot(C+D)^2}-R = 0.00000$$

c a R A B C D E F G

Unit = 1.00000
A = 0.16174
B = 0.43935
C = 0.55764
D = 0.70731
E = 0.86181
F = 1.43635
G = 1.17805

$\frac{A}{B}$ = 0.36813

ac = 0.36813

R = 0.34550

$$\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-(D\cdot E))-ac\cdot G^2\cdot((C+D)\cdot F-(D\cdot E))^2}{((C+D)\cdot F-(D\cdot E))^2\cdot G^2+F^2\cdot(C+D)^2}-R = 0.00000$$

c a A R B C D E G F

Unit = 1.00000
A = 0.17622
B = 0.39349
C = 0.55764
D = 0.94630
E = 0.84974
F = 1.08149
G = 1.26737

$\frac{B-A}{B} = 0.55215$

ac = 0.55215

R = 0.29354

$$\frac{F\cdot G\cdot(C+D)\cdot((C+D)\cdot F-(D\cdot E))-ac\cdot G^2\cdot((C+D)\cdot F-(D\cdot E))^2}{((C+D)\cdot F-(D\cdot E))^2\cdot G^2+F^2\cdot(C+D)^2}-R = 0.00000$$

c a A R B C E D F G

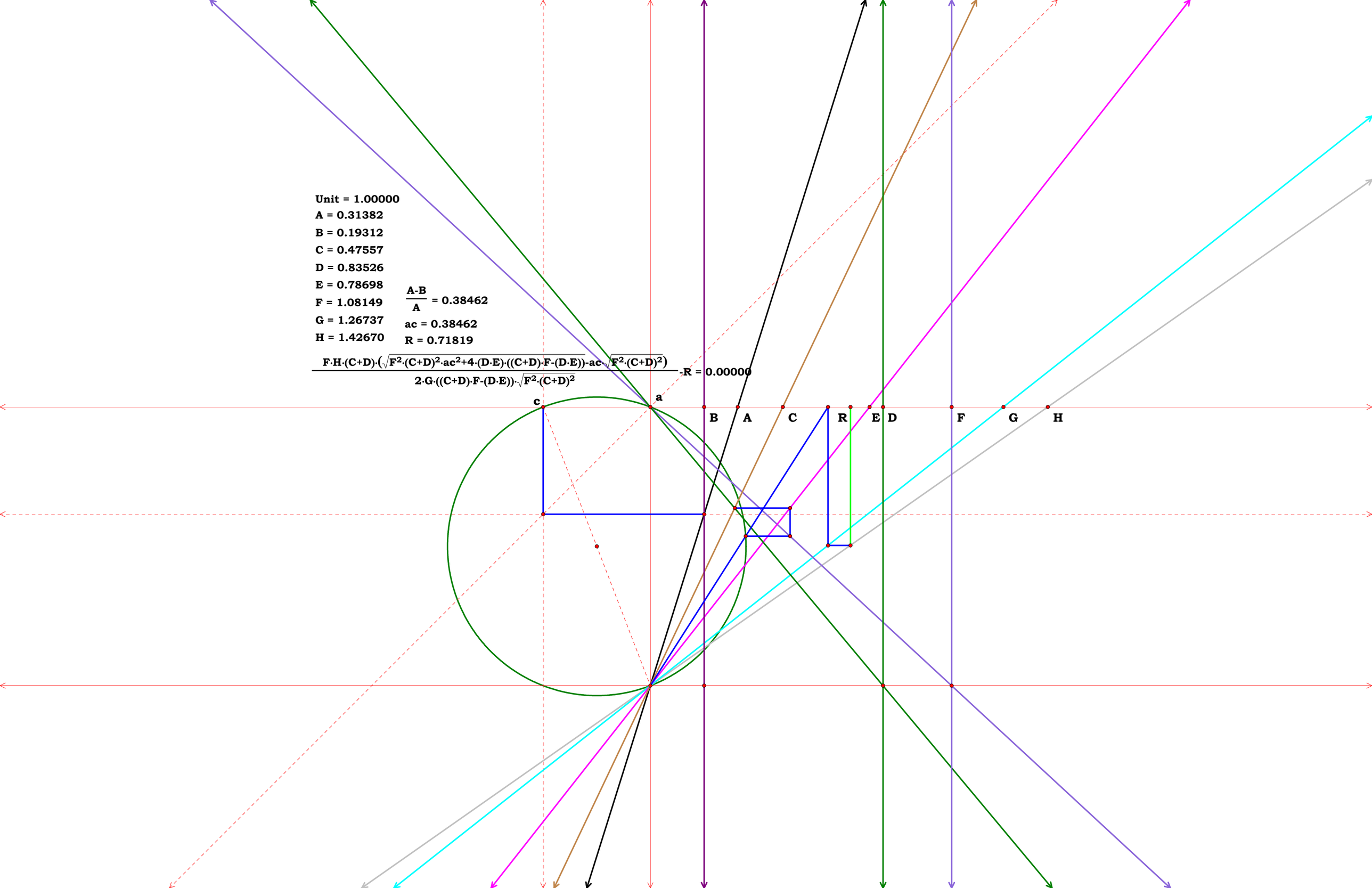
Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.47557
D = 0.83526
E = 0.78698
F = 1.08149
G = 1.26737
H = 1.42670

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.71819

$$\frac{F\cdot H\cdot(C+D)\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot ac^2+4\cdot(D\cdot E)\cdot((C+D)\cdot F-(D\cdot E))}-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)}{2\cdot G\cdot((C+D)\cdot F-(D\cdot E))\cdot\sqrt{F^2\cdot(C+D)^2}}-R = 0.00000$$



Unit = 1.00000
A = 0.48764
B = 0.22209
C = 0.56247
D = 0.70731
E = 0.86181
F = 1.71879
G = 1.26737
H = 2.17263

$\frac{B}{A}$ = 0.45545

ac = 0.45545

R = 0.65512

$$\frac{F\cdot H\cdot(C+D)\cdot\left(\sqrt{F^2\cdot(C+D)^2\cdot ac^2+4\cdot(D\cdot E)\cdot((C+D)\cdot F-(D\cdot E))}-ac\cdot\sqrt{F^2\cdot(C+D)^2}\right)}{2\cdot G\cdot((C+D)\cdot F-(D\cdot E))\cdot\sqrt{F^2\cdot(C+D)^2}}-R = 0.00000$$

c a B A C R D E G F H

Unit = 1.00000
A = 0.21485
B = 0.42487
C = 0.50936
D = 0.61317
E = 0.86664
F = 0.97768
G = 1.25047
H = 1.47256

$\frac{A}{A+B} = 0.33585$

ac = 0.33585

R = 0.82026

$\frac{F \cdot H \cdot (C+D) \cdot \left(\sqrt{(F \cdot (C+D))^2 \cdot ac^2 + 4 \cdot (D \cdot E) \cdot ((F \cdot (C+D)) - (D \cdot E))} - ac\sqrt{(F \cdot (C+D))^2}\right)}{2 \cdot G \cdot ((F \cdot (C+D)) - (D \cdot E)) \cdot \sqrt{(F \cdot (C+D))^2}} - R = 0.00000$

c a A B C D R E F G H

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.55764
D = 0.70731
E = 1.00182
F = 0.95596
G = 1.26737
H = 1.53050

$\frac{B}{A+B} = 0.63529$

ac = 0.63529
R = 0.78302

$$\frac{F\cdot H\cdot(C+D)\cdot\left(\sqrt{(F\cdot(C+D))^2\cdot ac^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}{2\cdot G\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}} - R = 0.00000$$

c a A B C D R F E G H

Unit = 1.00000
A = 0.19071
B = 0.43211
C = 0.61799
D = 0.86905
E = 0.98734
F = 1.08149
G = 1.26737
H = 1.45566

$\frac{A}{B} = 0.44134$

ac = 0.44134

R = 0.79983

$$\frac{F\cdot H\cdot(C+D)\cdot\left(\sqrt{(F\cdot(C+D))^2\cdot ac^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}{2\cdot G\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}} - R = 0.00000$$

c a A B C R D E F G H

C+D = 1.48705
D·E = 0.85805
F·(C+D) = 1.60822

Unit = 1.00000
A = 0.24140
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.95354
F = 0.84250
G = 1.26737
H = 1.54740

$\frac{B-A}{B} = 0.38272$

ac = 0.38272

R = 1.08833

$$\frac{F\cdot H\cdot(C+D)\cdot\left(\sqrt{(F\cdot(C+D))^2\cdot ac^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\sqrt{(F\cdot(C+D))^2}\right)}{2\cdot G\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}} - R = 0.00000$$

c a A B C D F E R G H

Unit = 1.00000

A = 0.27761

B = 0.19312

C = 0.58420

D = 0.70731

E = 0.52867

F = 1.08149

$\frac{A-B}{A} = 0.30435$

ac = 0.30435

R = 0.84288

$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c

a

B

A

E

C

D

R

F

Unit = 1.00000

A = 0.62282

B = 0.23175

C = 0.55764 $\frac{B}{A}$ = 0.37209

D = 0.70731 ac = 0.37209

E = 0.48764 R = 0.83533

F = 1.08149

$$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}}-R = 0.00000$$

c a B E C A D R F

Unit = 1.00000
A = 0.19071
B = 0.38383
C = 0.55764
D = 0.70731
E = 0.49246
F = 1.08149

$\frac{A}{A+B} = 0.33193$

ac = 0.33193

R = 0.85189

$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c
a
A
B
E
C
D
R
F

Unit = 1.00000
A = 0.22451
B = 0.40073
C = 0.55764
D = 0.70731
E = 0.27520
F = 1.08149

$\frac{B}{A+B} = 0.64093$

ac = 0.64093

R = 0.92721

$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}} - R = 0.00000$

c
a
A E
B
C
D
R
F

Unit = 1.00000
A = 0.63731
B = 0.22209
C = 0.55764
D = 0.70731
E = 0.49488
F = 1.08149

$\frac{B}{A+B} = 0.25843$

ac = 0.25843
R = 0.88600

$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c
a
B
E
C
A
D
R
F

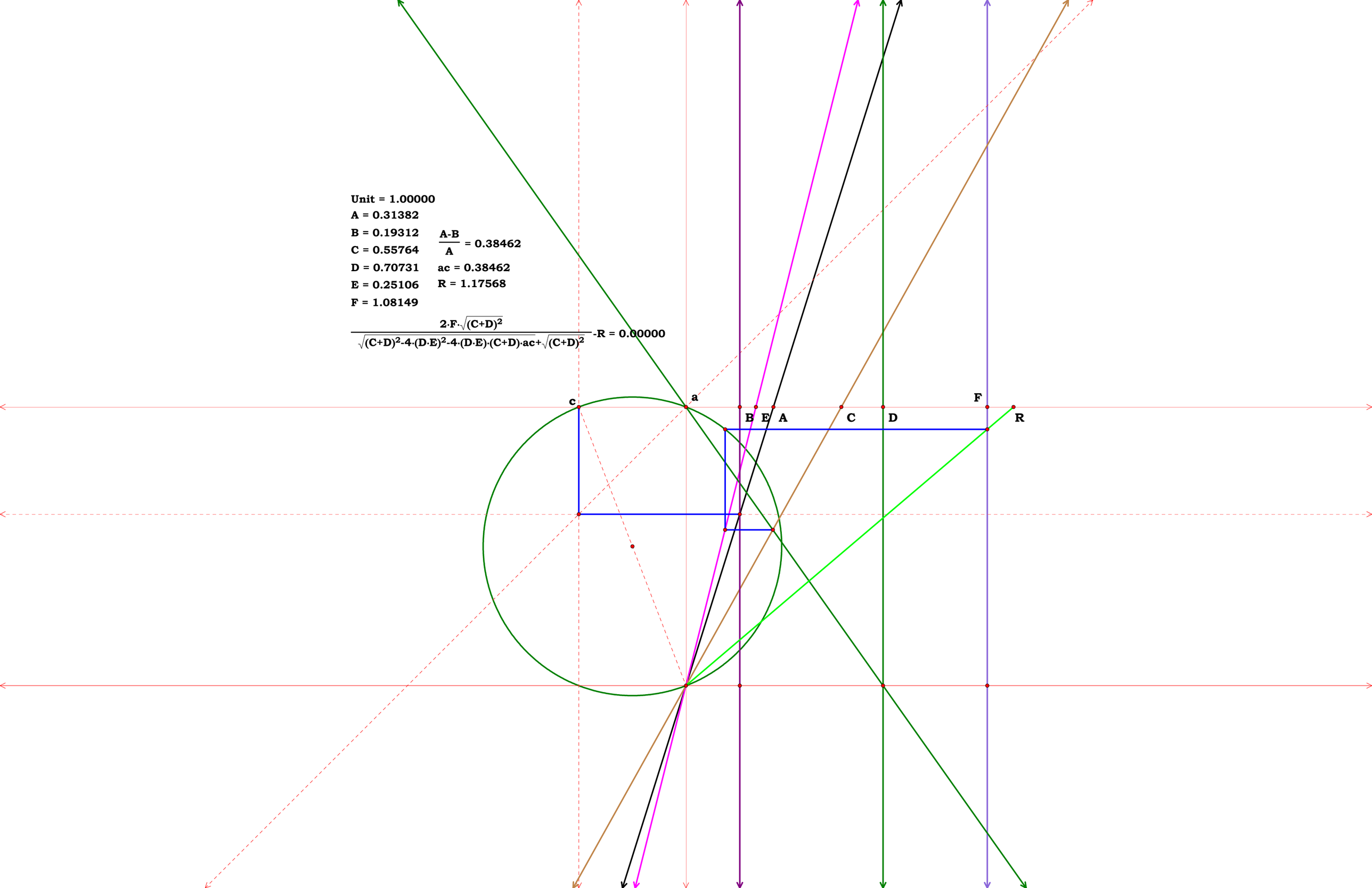
Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.28244
F = 1.08149

$\frac{B}{A+B} = 0.63529$

ac = 0.63529
R = 0.92269

$\frac{F\cdot\left(\sqrt{(C+D)^2-4\cdot(D\cdot E)\cdot(ac\cdot(C+D)+(D\cdot E))}+\sqrt{(C+D)^2}\right)}{2\cdot\sqrt{(C+D)^2}}-R = 0.00000$

c
a
A
E
B
C
D
R
F


Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.55764
D = 0.70731
E = 0.25106
F = 1.08149
(A-B)/A = 0.38462
ac = 0.38462
R = 1.17568
2·F·√((C+D)²) / √((C+D)²-4·(D·E)²-4·(D·E)·(C+D)·ac+√((C+D)²)) -R = 0.00000
c
a
B
E
A
C
D
F
R

Unit = 1.00000
A = 1.41704
B = 0.23175
C = 0.34521
D = 0.50212
E = 0.46832
F = 1.08149

$\frac{B}{A} = 0.16354$

ac = 0.16354

R = 1.26165

$$\frac{2 \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 - 4 \cdot (D \cdot E)^2 - 4 \cdot (D \cdot E) \cdot (C+D) \cdot ac + \sqrt{(C+D)^2}}} - R = 0.00000$$

c a B C E D F R A

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.48764
F = 1.08149

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 1.36255

$\frac{2 \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 - 4 \cdot (D \cdot E)^2 - 4 \cdot (D \cdot E) \cdot (C+D) \cdot ac} + \sqrt{(C+D)^2}} - R = 0.00000$

c a A B E C D F R

Unit = 1.00000
A = 0.12312
B = 0.39590
C = 0.55764
D = 0.70731
E = 0.29451
F = 1.08149

$\frac{B}{A+B} = 0.76279$

ac = 0.76279

R = 1.33209

$\frac{2 \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 - 4 \cdot (D \cdot E)^2 - 4 \cdot (D \cdot E) \cdot (C+D) \cdot ac + \sqrt{(C+D)^2}}} - R = 0.00000$

c
a
A
E
B
C
D
F
R

Unit = 1.00000
A = 0.12794
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.47315
F = 1.08149

$\frac{A}{B} = 0.32716$

ac = 0.32716

R = 1.34231

$$\frac{2 \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2 - 4 \cdot (D \cdot E)^2 - 4 \cdot (D \cdot E) \cdot (C+D) \cdot ac} + \sqrt{(C+D)^2}} - R = 0.00000$$

c a A B E C D F R

Unit = 1.00000
A = 0.26554
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.33796
F = 1.08149

$\frac{B-A}{B}$ = 0.32099

ac = 0.32099

R = 1.21249

$\frac{2 \cdot F \cdot \sqrt{(C+D)^2}}{\sqrt{(C+D)^2-4 \cdot (D \cdot E)^2-4 \cdot (D \cdot E) \cdot (C+D) \cdot ac}+\sqrt{(C+D)^2}}$ -R = 0.00000

c
a
A
E
B
C
D
F
R

Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.51902
D = 0.71938
E = 1.67293
F = 1.40497
G = 1.31565
H = 0.65420

$\frac{A-B}{A} = 0.38462$

$ac = 0.38462$

$R = 0.86177$

$C+D = 1.23840$

$D \cdot E = 1.20347$

$F \cdot (C+D) = 1.73991$

$$\frac{2 \cdot G \cdot H \cdot ((F \cdot (C+D)) - (D \cdot E)) \cdot \sqrt{(F \cdot (C+D))^2}}{F \cdot (C+D) \cdot \left(\sqrt{ac^2 \cdot (F \cdot (C+D))^2 + 4 \cdot (D \cdot E) \cdot ((F \cdot (C+D)) - (D \cdot E))} - ac \cdot \sqrt{(F \cdot (C+D))^2}\right)} - R = 0.00000$$

c a B A C H D R G F E

Unit = 1.00000
A = 0.26072
B = 0.23175
C = 0.55764
D = 0.70731
E = 0.97286
F = 1.53291
G = 1.26737
H = 0.44418

$\frac{B}{A}$ = 0.88889
ac = 0.88889
R = 1.74099
C+D = 1.26495
D·E = 0.68811
F·(C+D) = 1.93906

$$\frac{2\cdot G\cdot H\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}}{F\cdot(C+D)\cdot\left(\sqrt{ac^2\cdot(F\cdot(C+D))^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}-R = 0.00000$$

c a B A H C D E G F R

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
E = 1.11528
F = 0.99458
G = 1.26737
H = 1.42670

$\frac{A}{A+B} = 0.32780$

ac = 0.32780
C+D = 1.26495
D·E = 0.78885
F·(C+D) = 1.25810
R = 1.94512

$$\frac{2\cdot G\cdot H\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}}{(F\cdot(C+D))\cdot\left(\sqrt{ac^2\cdot(F\cdot(C+D))^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}-R = 0.00000$$

c a A B C D F E G H R

Unit = 1.00000

A = 0.22451

B = 0.35004

C = 0.51419

D = 0.71455

E = 0.98493

F = 0.83284

G = 1.26737

H = 1.07907

$\frac{B}{A+B} = 0.60924$

ac = 0.60924

C+D = 1.22874

D·E = 0.70378

F·(C+D) = 1.02335

R = 1.70857

$$\frac{2\cdot G\cdot H\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}}{(F\cdot(C+D))\cdot\left(\sqrt{ac^2\cdot(F\cdot(C+D))^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}-R = 0.00000$$

c a A B C D F E H G R

Unit = 1.00000
A = 0.19071
B = 0.46832
C = 0.33555
D = 0.68317
E = 0.91492
F = 1.05252
G = 1.26737
H = 0.99941

$\frac{A}{B}$ = 0.40722
ac = 0.40722
R = 1.60150
C+D = 1.01872
D·E = 0.62505
F·(C+D) = 1.07223

$$\frac{2\cdot G\cdot H\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}}{(F\cdot(C+D))\cdot\left(\sqrt{ac^2\cdot(F\cdot(C+D))^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}-R = 0.00000$$

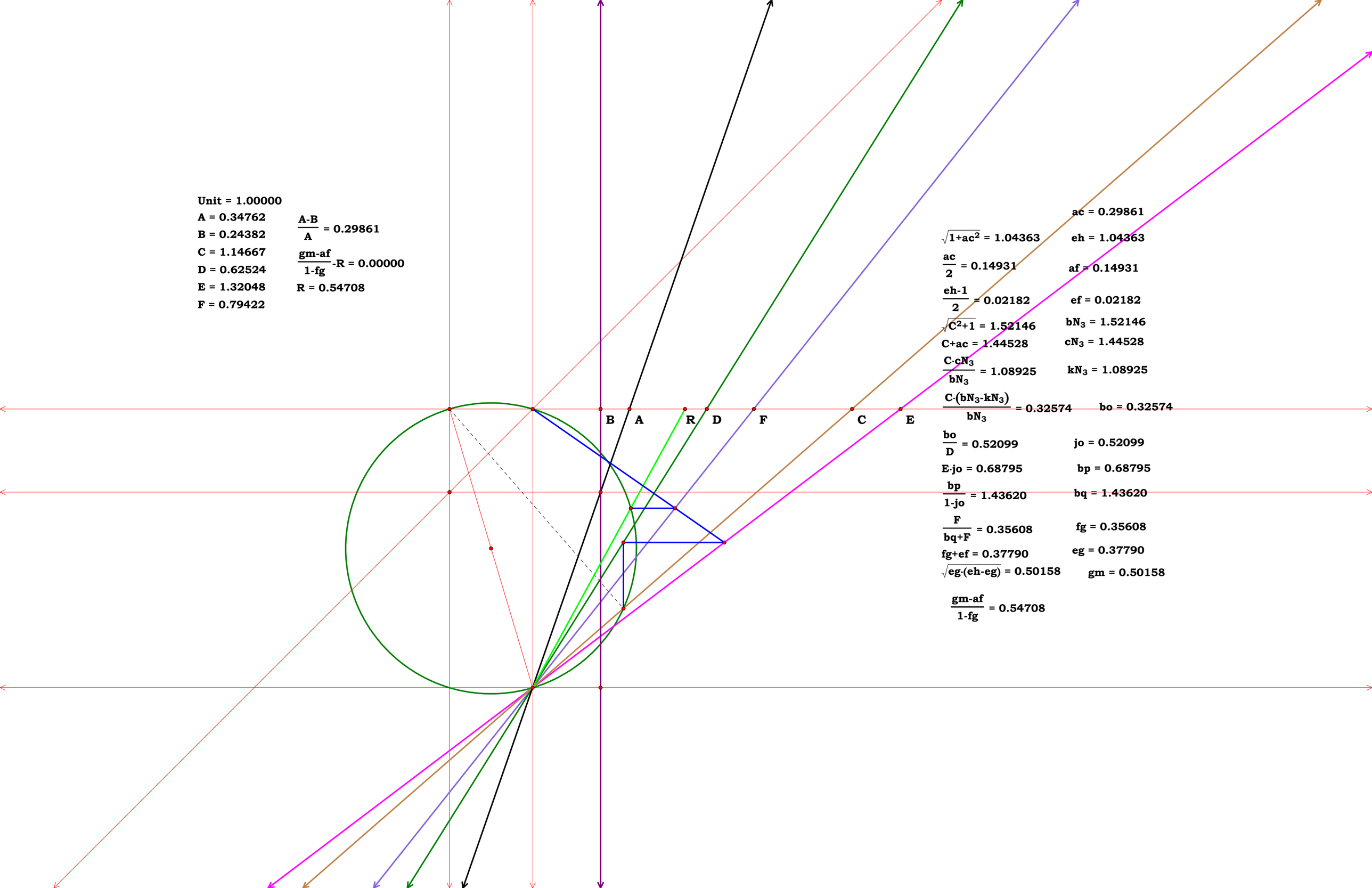
c
a
A
C
B
D
E
H
F
G
R

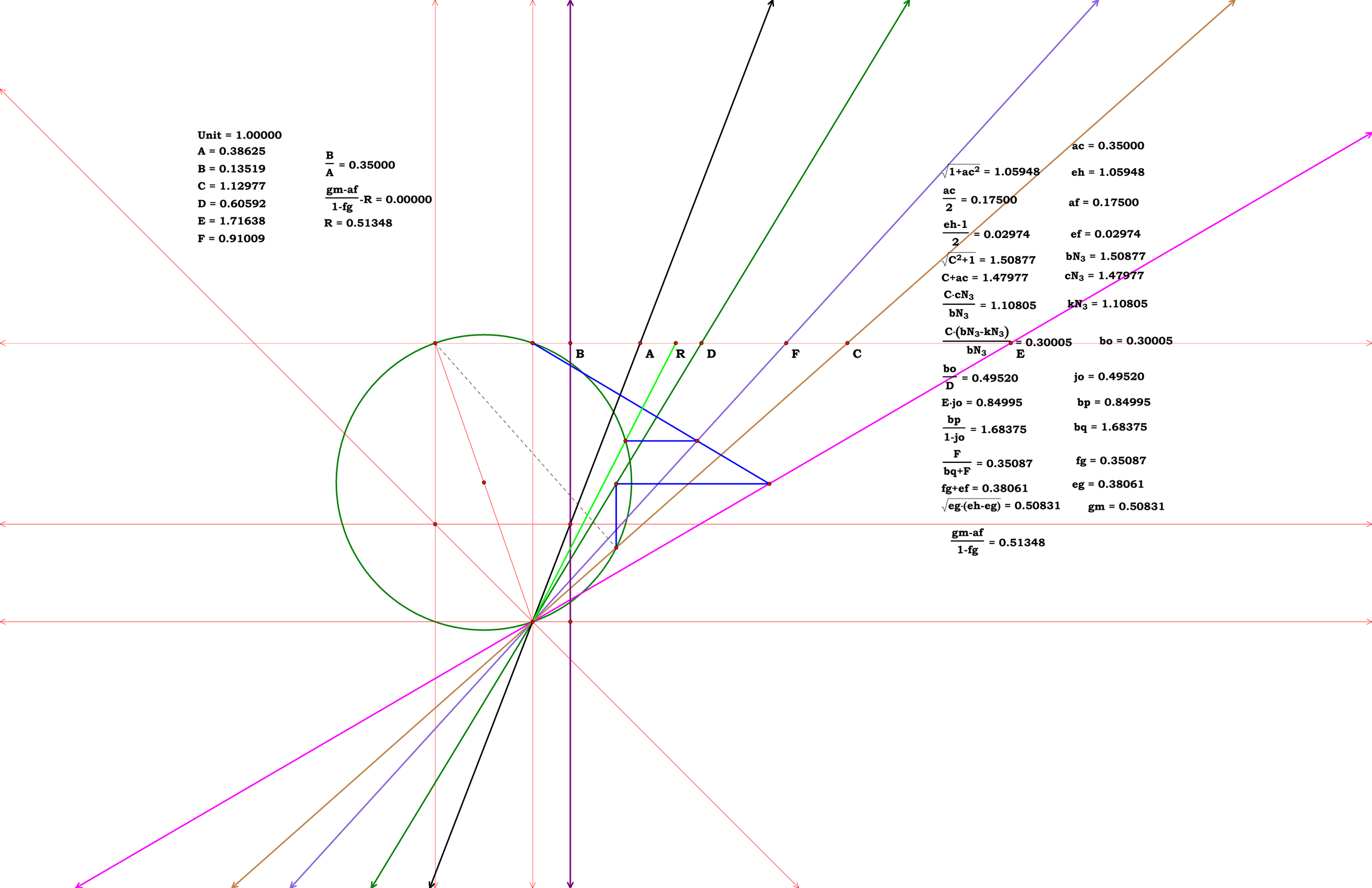
Unit = 1.00000
A = 0.26796
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.91975
F = 0.79905
G = 1.23840
H = 1.42670

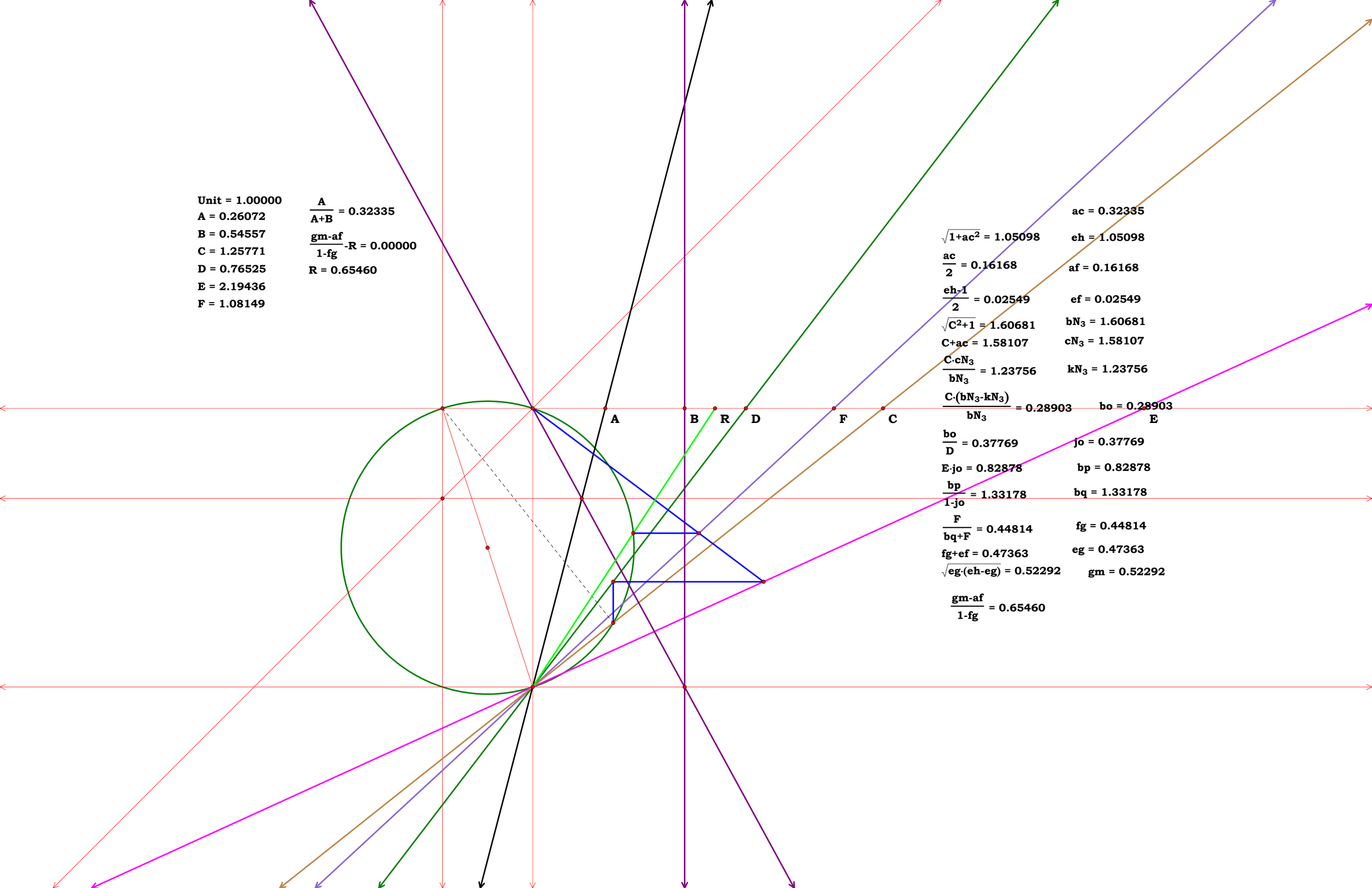
$\frac{B-A}{B}$ = 0.31481
ac = 0.31481
R = 1.81599
C+D = 1.26495
D·E = 0.65055
F·(C+D) = 1.01076

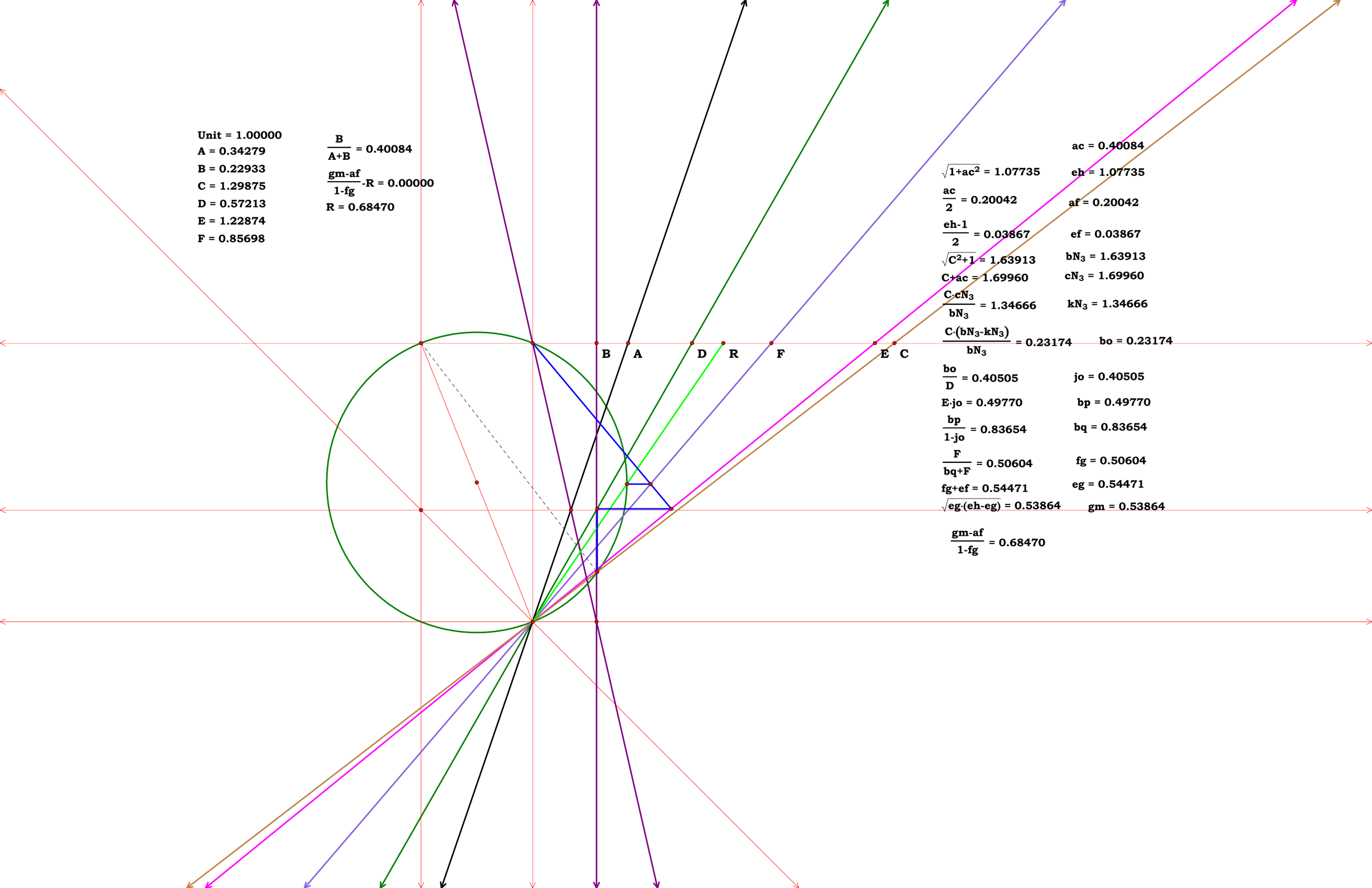
$$\frac{2\cdot G\cdot H\cdot((F\cdot(C+D))-(D\cdot E))\cdot\sqrt{(F\cdot(C+D))^2}}{(F\cdot(C+D))\cdot\left(\sqrt{ac^2\cdot(F\cdot(C+D))^2+4\cdot(D\cdot E)\cdot((F\cdot(C+D))-(D\cdot E))}-ac\cdot\sqrt{(F\cdot(C+D))^2}\right)}-R = 0.00000$$

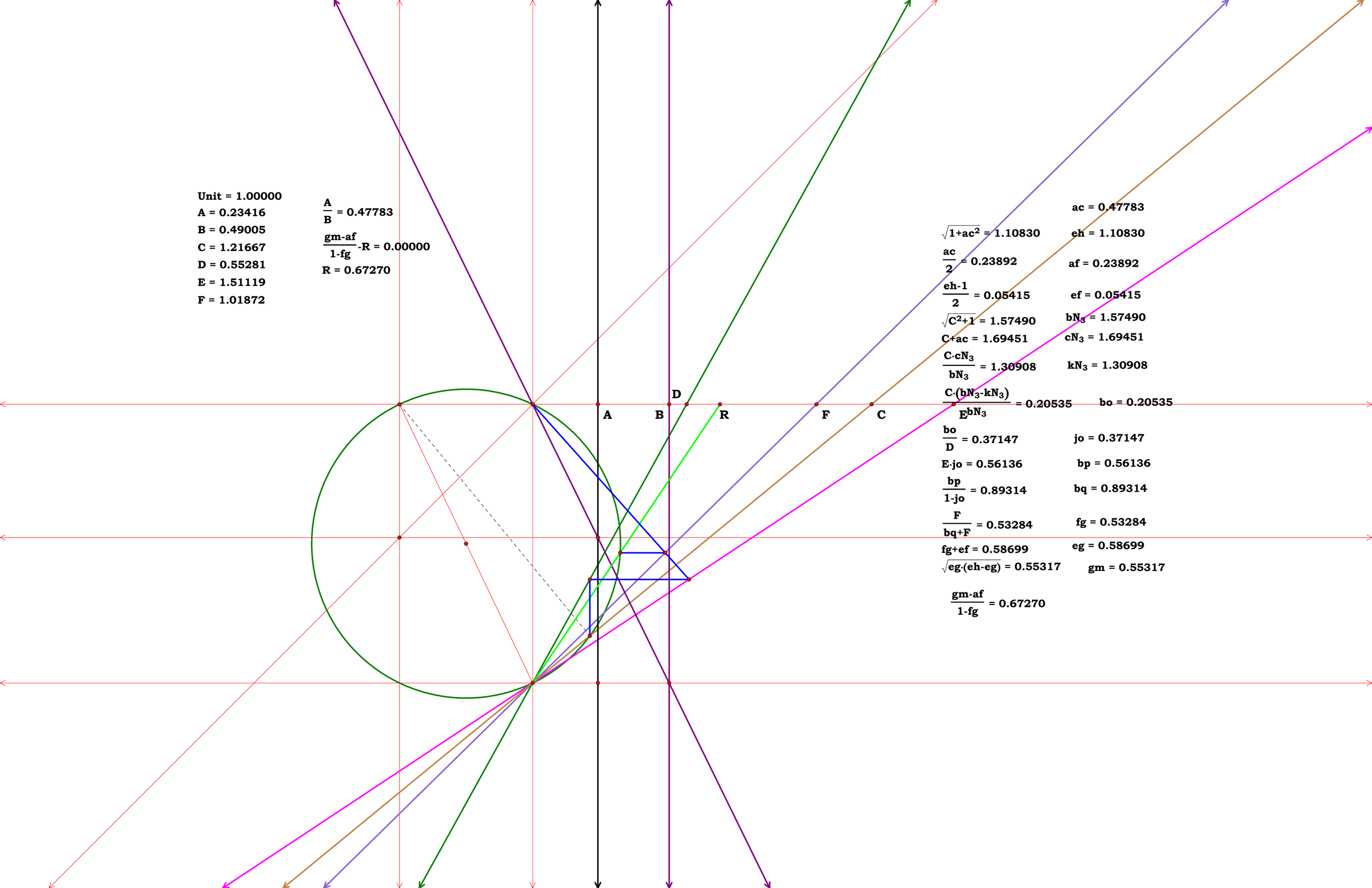
c a A B C D F E G H R

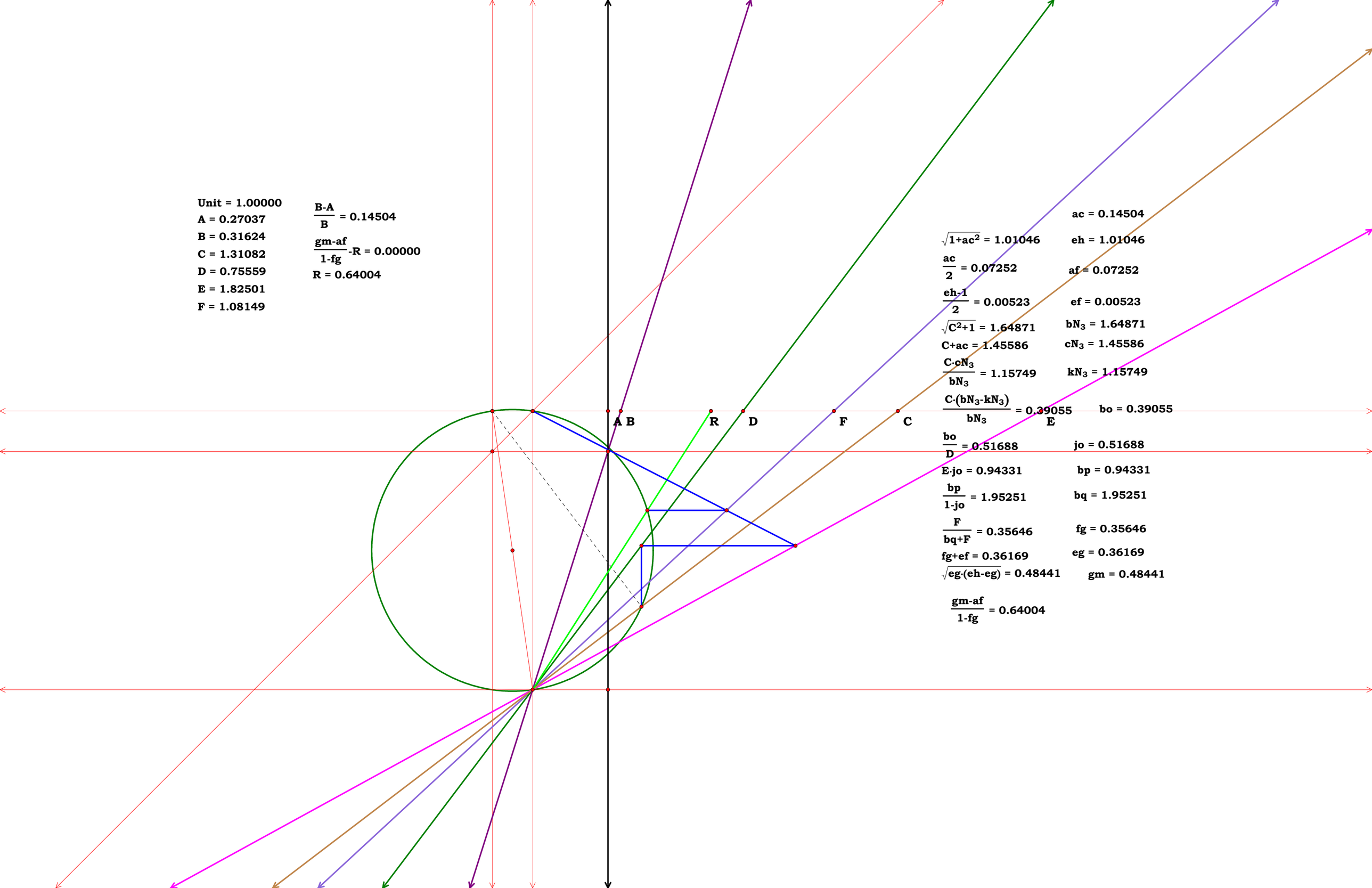

Unit = 1.00000
A = 0.34762
B = 0.24382
C = 1.14667
D = 0.62524
E = 1.32048
F = 0.79422
(A-B)/A = 0.29861
(gm-af)/(1-fg)-R = 0.00000
R = 0.54708
ac = 0.29861
√(1+ac²) = 1.04363
eh = 1.04363
ac/2 = 0.14931
af = 0.14931
(eh-1)/2 = 0.02182
ef = 0.02182
√(C²+1) = 1.52146
bN3 = 1.52146
C+ac = 1.44528
cN3 = 1.44528
C·cN3/bN3 = 1.08925
kN3 = 1.08925
C·(bN3-kN3)/bN3 = 0.32574
bo = 0.32574
bo/D = 0.52099
jo = 0.52099
E·jo = 0.68795
bp = 0.68795
bp/(1-jo) = 1.43620
bq = 1.43620
F/(bq+F) = 0.35608
fg = 0.35608
fg+ef = 0.37790
eg = 0.37790
√(eg·(eh-eg)) = 0.50158
gm = 0.50158
(gm-af)/(1-fg) = 0.54708
B
A
R
D
F
C
E


Unit = 1.00000
A = 0.38625
B = 0.13519
C = 1.12977
D = 0.60592
E = 1.71638
F = 0.91009
B/A = 0.35000
(gm-af)/(1-fg)-R = 0.00000
R = 0.51348
B
A
R
D
F
C
E
ac = 0.35000
√(1+ac²) = 1.05948
eh = 1.05948
ac/2 = 0.17500
af = 0.17500
(eh-1)/2 = 0.02974
ef = 0.02974
√(C²+1) = 1.50877
bN3 = 1.50877
C+ac = 1.47977
cN3 = 1.47977
C·cN3/bN3 = 1.10805
kN3 = 1.10805
C·(bN3-kN3)/bN3 = 0.30005
bo = 0.30005
bo/D = 0.49520
jo = 0.49520
E·jo = 0.84995
bp = 0.84995
bp/(1-jo) = 1.68375
bq = 1.68375
F/(bq+F) = 0.35087
fg = 0.35087
fg+ef = 0.38061
eg = 0.38061
√(eg·(eh-eg)) = 0.50831
gm = 0.50831
(gm-af)/(1-fg) = 0.51348


Unit = 1.00000
A = 0.26072
B = 0.54557
C = 1.25771
D = 0.76525
E = 2.19436
F = 1.08149
A/(A+B) = 0.32335
(gm-af)/(1-fg)-R = 0.00000
R = 0.65460
ac = 0.32335
√(1+ac²) = 1.05098
eh = 1.05098
ac/2 = 0.16168
af = 0.16168
(eh-1)/2 = 0.02549
ef = 0.02549
√(C²+1) = 1.60681
bN3 = 1.60681
C+ac = 1.58107
cN3 = 1.58107
C·cN3/bN3 = 1.23756
kN3 = 1.23756
C·(bN3-kN3)/bN3 = 0.28903
bo = 0.28903
bo/D = 0.37769
jo = 0.37769
E·jo = 0.82878
bp = 0.82878
bp/(1-jo) = 1.33178
bq = 1.33178
F/(bq+F) = 0.44814
fg = 0.44814
fg+ef = 0.47363
eg = 0.47363
√(eg·(eh-eg)) = 0.52292
gm = 0.52292
(gm-af)/(1-fg) = 0.65460
A
B
R
D
F
C
E


Unit = 1.00000
A = 0.34279
B = 0.22933
C = 1.29875
D = 0.57213
E = 1.22874
F = 0.85698
B/(A+B) = 0.40084
(gm-af)/(1-fg)-R = 0.00000
R = 0.68470
ac = 0.40084
√(1+ac²) = 1.07735
eh = 1.07735
ac/2 = 0.20042
af = 0.20042
(eh-1)/2 = 0.03867
ef = 0.03867
√(C²+1) = 1.63913
bN3 = 1.63913
C+ac = 1.69960
cN3 = 1.69960
C·cN3/bN3 = 1.34666
kN3 = 1.34666
C·(bN3-kN3)/bN3 = 0.23174
bo = 0.23174
bo/D = 0.40505
jo = 0.40505
E·jo = 0.49770
bp = 0.49770
bp/(1-jo) = 0.83654
bq = 0.83654
F/(bq+F) = 0.50604
fg = 0.50604
fg+ef = 0.54471
eg = 0.54471
√(eg·(eh-eg)) = 0.53864
gm = 0.53864
(gm-af)/(1-fg) = 0.68470
B
A
D
R
F
E
C


Unit = 1.00000
A = 0.23416
B = 0.49005
C = 1.21667
D = 0.55281
E = 1.51119
F = 1.01872
A/B = 0.47783
(gm-af)/(1-fg) -R = 0.00000
R = 0.67270
ac = 0.47783
√(1+ac²) = 1.10830
eh = 1.10830
ac/2 = 0.23892
af = 0.23892
(eh-1)/2 = 0.05415
ef = 0.05415
√(C²+1) = 1.57490
bN3 = 1.57490
C+ac = 1.69451
cN3 = 1.69451
C·cN3/bN3 = 1.30908
kN3 = 1.30908
C·(bN3-kN3)/E^bN3 = 0.20535
bo = 0.20535
bo/D = 0.37147
jo = 0.37147
E·jo = 0.56136
bp = 0.56136
bp/(1-jo) = 0.89314
bq = 0.89314
F/(bq+F) = 0.53284
fg = 0.53284
fg+ef = 0.58699
eg = 0.58699
√(eg·(eh-eg)) = 0.55317
gm = 0.55317
(gm-af)/(1-fg) = 0.67270
A
B
D
R
F
C



Unit = 1.00000
A = 0.27037
B = 0.31624
C = 1.31082
D = 0.75559
E = 1.82501
F = 1.08149

$\frac{B-A}{B}$ = 0.14504

$\frac{gm-af}{1-fg}$-R = 0.00000

R = 0.64004

ac = 0.14504

$\sqrt{1+ac^2}$ = 1.01046 eh = 1.01046

$\frac{ac}{2}$ = 0.07252 af = 0.07252

$\frac{eh-1}{2}$ = 0.00523 ef = 0.00523

$\sqrt{C^2+1}$ = 1.64871 bN_3 = 1.64871

C+ac = 1.45586 cN_3 = 1.45586

$\frac{C \cdot cN_3}{bN_3}$ = 1.15749 kN_3 = 1.15749

$\frac{C \cdot (bN_3 - kN_3)}{bN_3}$ = 0.39055 bo = 0.39055

$\frac{bo}{D}$ = 0.51688 jo = 0.51688

E·jo = 0.94331 bp = 0.94331

$\frac{bp}{1-jo}$ = 1.95251 bq = 1.95251

$\frac{F}{bq+F}$ = 0.35646 fg = 0.35646

fg+ef = 0.36169 eg = 0.36169

$\sqrt{eg \cdot (eh-eg)}$ = 0.48441 gm = 0.48441

$\frac{gm-af}{1-fg}$ = 0.64004

Unit = 1.00000

A = 0.29934

B = 0.19312

C = 1.45325

D = 0.62765

E = 1.91192

F = 1.08149

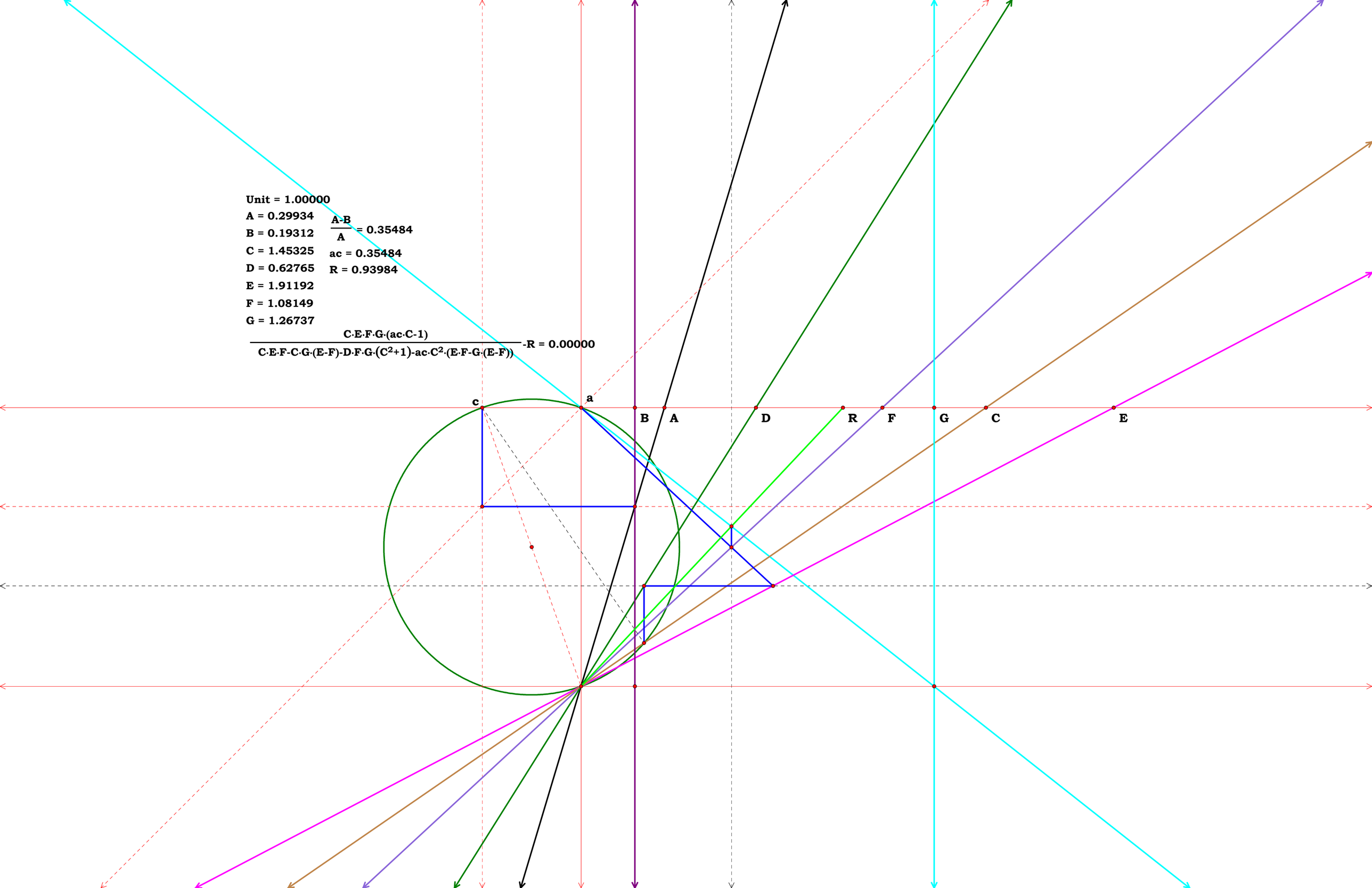
G = 1.26737

$\frac{A-B}{A} = 0.35484$

ac = 0.35484

R = 0.93984

$\frac{C \cdot E \cdot F \cdot G \cdot (ac \cdot C - 1)}{C \cdot E \cdot F - C \cdot G \cdot (E-F) - D \cdot F \cdot G \cdot (C^2+1) - ac \cdot C^2 \cdot (E \cdot F - G \cdot (E-F))} - R = 0.00000$



Unit = 1.00000
A = 0.52143
B = 0.17140
C = 1.40738
D = 0.70731
E = 1.87329
F = 1.08149
G = 1.26737

$\frac{B}{A}$ = 0.32870
ac = 0.32870
R = 0.91753

$$\frac{C\cdot E\cdot F\cdot G\cdot(ac\cdot C-1)}{C\cdot E\cdot F-C\cdot G\cdot(E-F)-D\cdot F\cdot G\cdot(C^2+1)-ac\cdot C^2\cdot(E\cdot F-G\cdot(E-F))}-R = 0.00000$$

c a A B D R F G C E

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
E = 0.97768
F = 1.08149
G = 1.26737

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.83752

$\frac{C \cdot E \cdot F \cdot G \cdot (ac \cdot C - 1)}{C \cdot E \cdot F - C \cdot G \cdot (E-F) - D \cdot F \cdot G \cdot (C^2+1) - ac \cdot C^2 \cdot (E \cdot F - G \cdot (E-F))} - R = 0.00000$

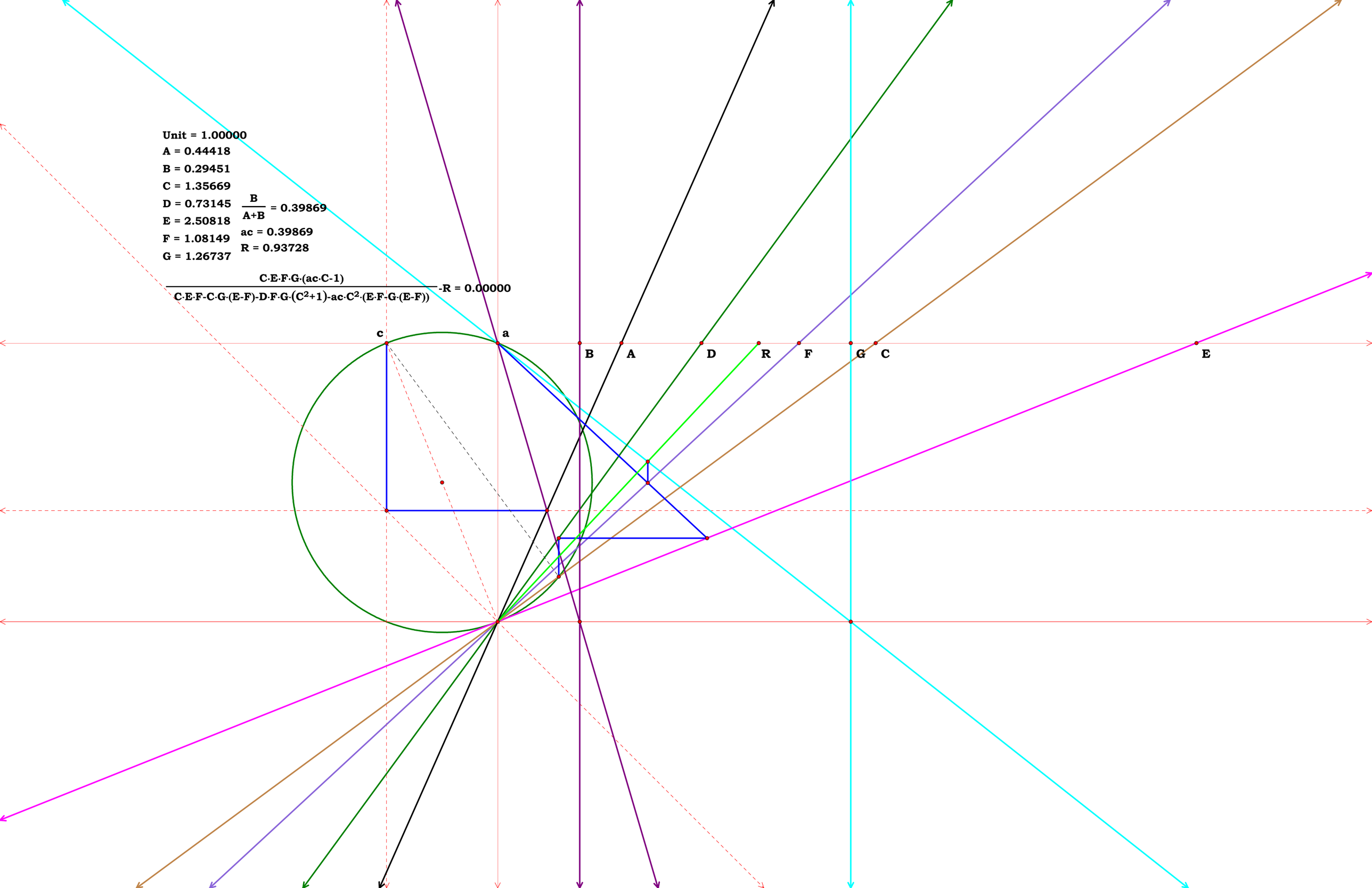
c a A B C D R E F G

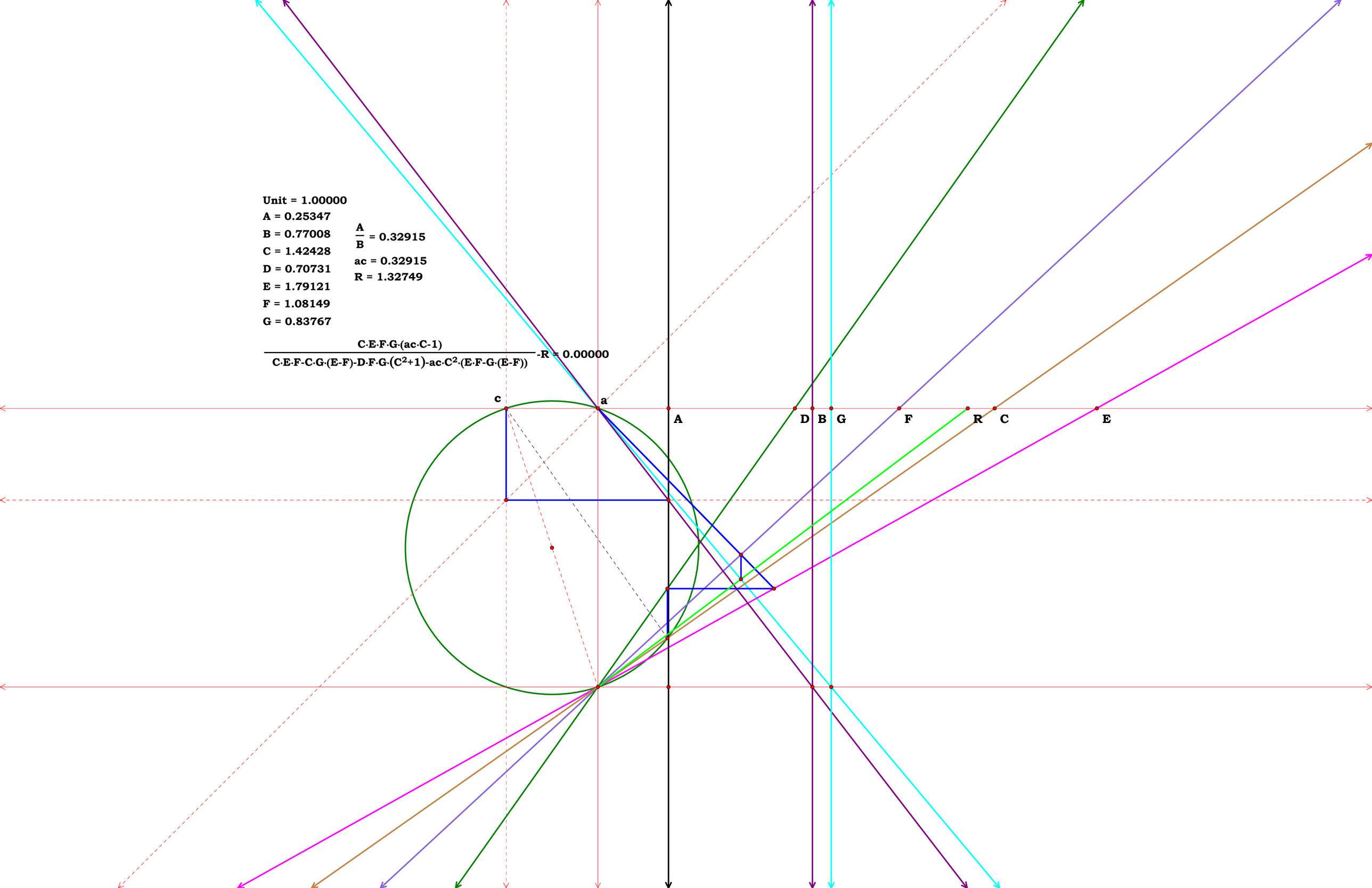
Unit = 1.00000
A = 0.44418
B = 0.29451
C = 1.35669
D = 0.73145
E = 2.50818
F = 1.08149
G = 1.26737

$\frac{B}{A+B} = 0.39869$

ac = 0.39869
R = 0.93728

$\frac{C \cdot E \cdot F \cdot G \cdot (ac \cdot C - 1)}{C \cdot E \cdot F - C \cdot G \cdot (E - F) - D \cdot F \cdot G \cdot (C^2+1) - ac \cdot C^2 \cdot (E \cdot F - G \cdot (E - F))} - R = 0.00000$



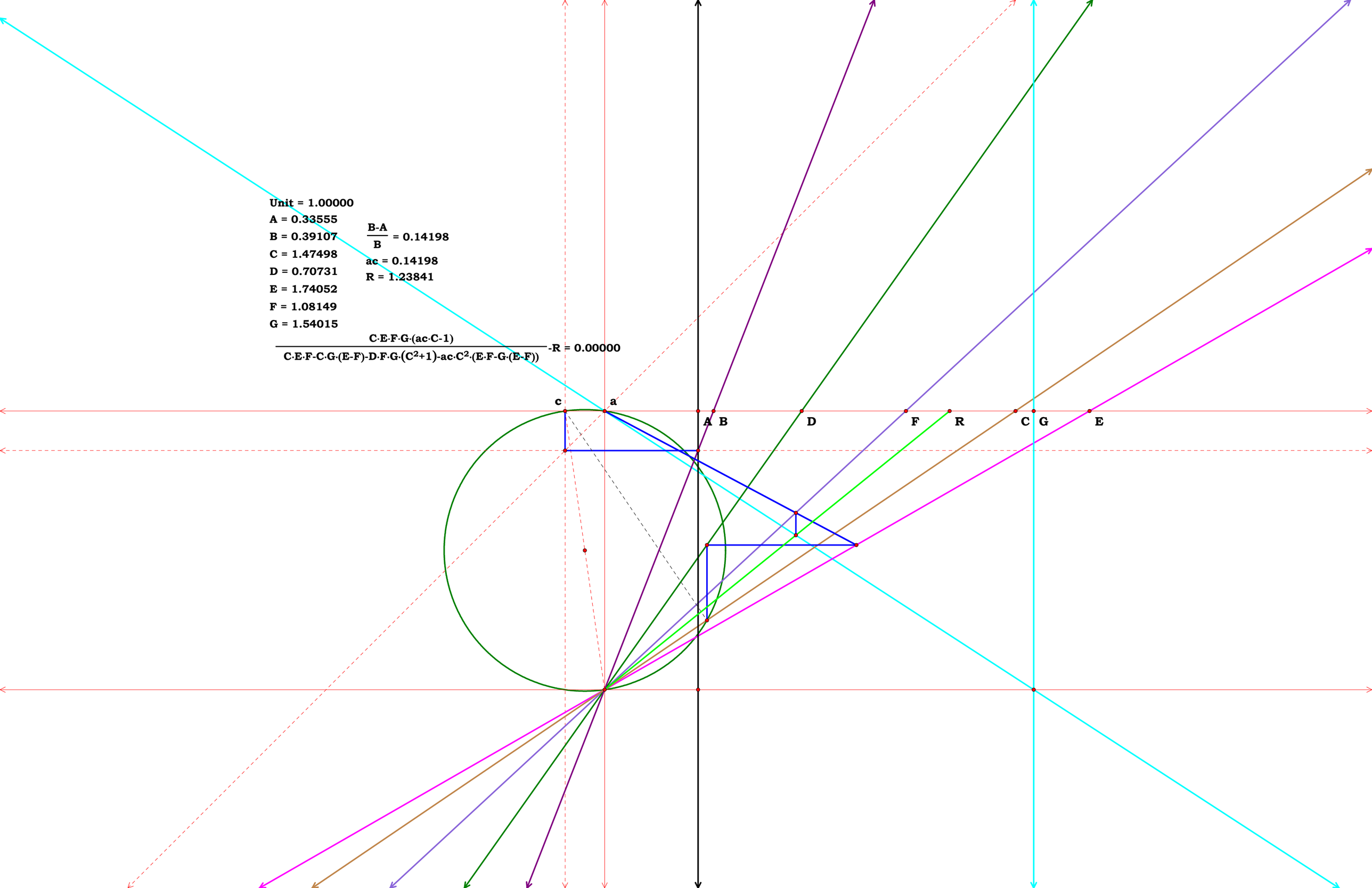

Unit = 1.00000
A = 0.25347
B = 0.77008
C = 1.42428
D = 0.70731
E = 1.79121
F = 1.08149
G = 0.83767
A/B = 0.32915
ac = 0.32915
R = 1.32749
C·E·F·G·(ac·C-1) / C·E·F-C·G·(E-F)-D·F·G·(C²+1)-ac·C²·(E·F-G·(E-F)) -R = 0.00000
c
a
A
D
B
G
F
R
C
E

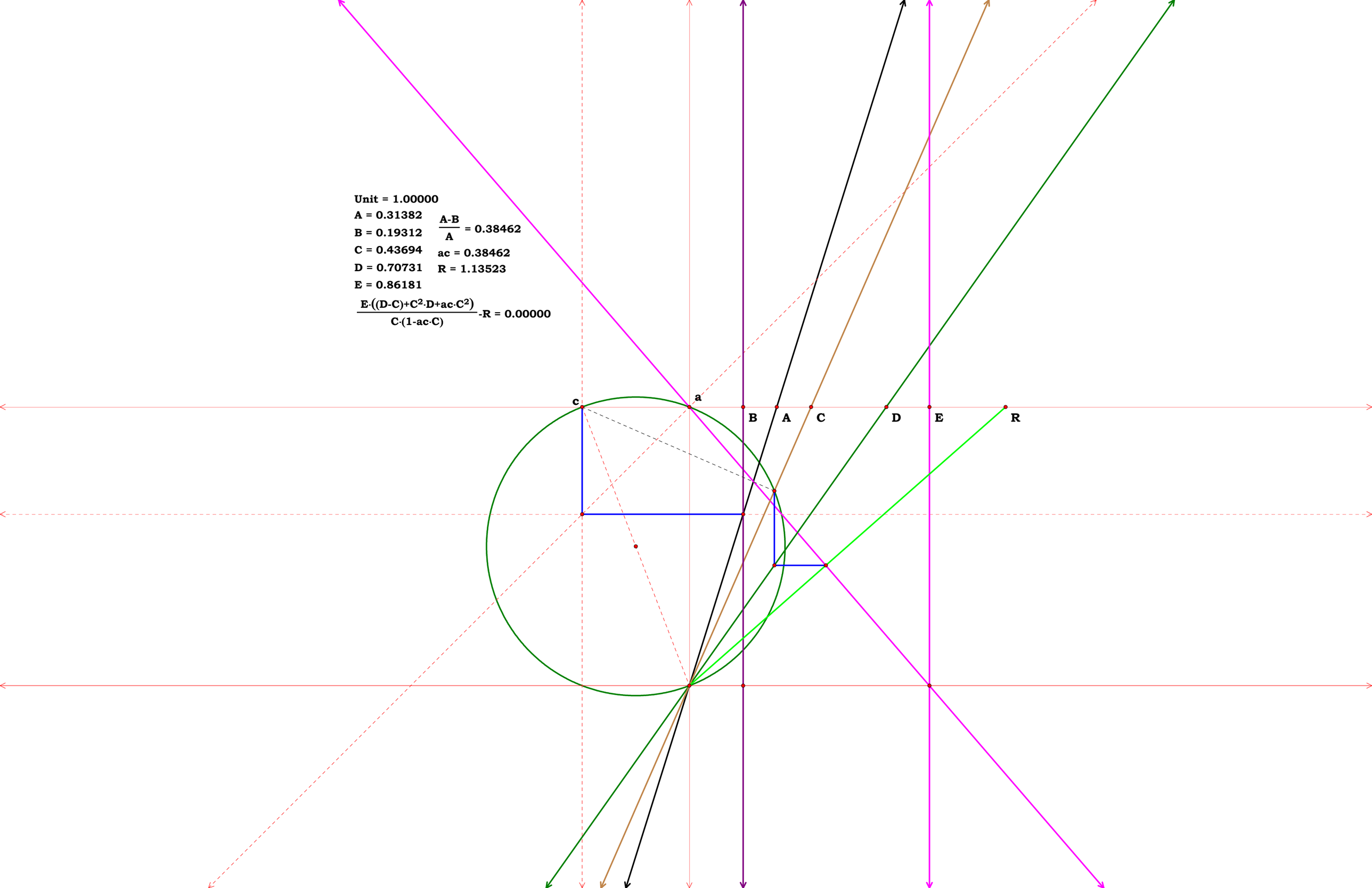
Unit = 1.00000
A = 0.33555
B = 0.39107
C = 1.47498
D = 0.70731
E = 1.74052
F = 1.08149
G = 1.54015

$\frac{B-A}{B} = 0.14198$

ac = 0.14198
R = 1.23841

$\frac{C \cdot E \cdot F \cdot G \cdot (ac \cdot C - 1)}{C \cdot E \cdot F - C \cdot G \cdot (E - F) - D \cdot F \cdot G \cdot (C^2 + 1) - ac \cdot C^2 \cdot (E \cdot F - G \cdot (E - F))} - R = 0.00000$




Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.43694
D = 0.70731
E = 0.86181
(A-B)/A = 0.38462
ac = 0.38462
R = 1.13523
E·((D-C)+C²·D+ac·C²)/(C·(1-ac·C))-R = 0.00000
c
a
B
A
C
D
E
R

Unit = 1.00000
A = 0.26072
B = 0.10139
C = 1.07183
D = 0.70731
E = 0.88837

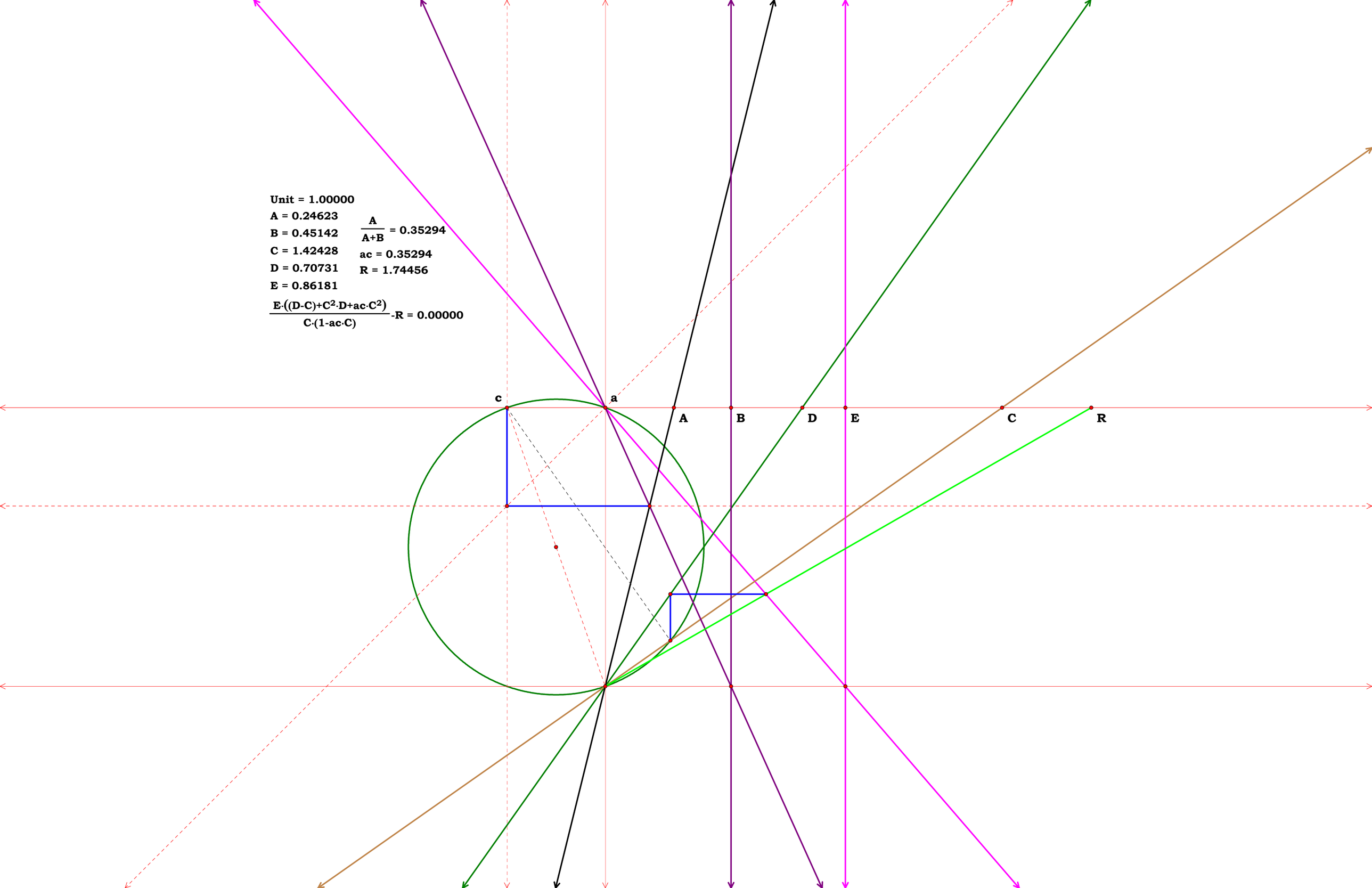
$\frac{B}{A}$ = 0.38889

ac = 0.38889

R = 1.27175

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{C\cdot(1-ac\cdot C)}$ -R = 0.00000

c a B A D E C R


Unit = 1.00000
A = 0.24623
B = 0.45142
C = 1.42428
D = 0.70731
E = 0.86181
$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{C\cdot(1-ac\cdot C)}$-R = 0.00000
$\frac{A}{A+B}$ = 0.35294
ac = 0.35294
R = 1.74456
c
a
A
B
D
E
C
R

Unit = 1.00000

A = 0.38866

B = 0.39107

C = 1.08390

D = 0.70731

E = 0.86181

$\frac{B}{A+B} = 0.50155$

ac = 0.50155

R = 1.81824

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{C\cdot(1-ac\cdot C)}-R = 0.00000$

c

a

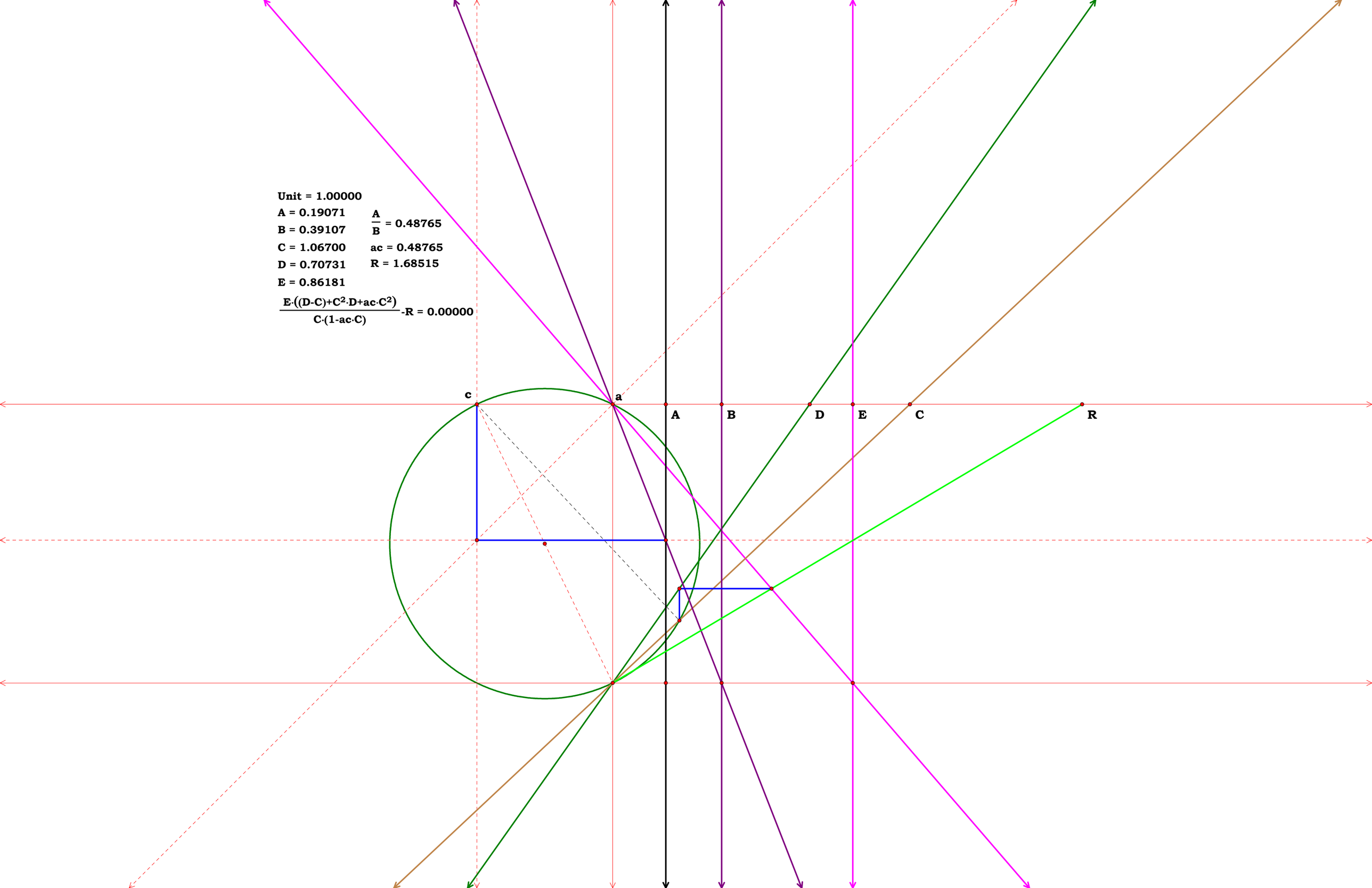
B

D

E

C

R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.06700
D = 0.70731
E = 0.86181
A/B = 0.48765
ac = 0.48765
R = 1.68515
E·((D-C)+C²·D+ac·C²) / C·(1-ac·C) -R = 0.00000
c
a
A
B
D
E
C
R

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.99941
D = 0.70731
E = 0.86181

$\frac{B-A}{B} = 0.51235$

ac = 0.51235
R = 1.63665

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{C\cdot(1-ac\cdot C)} - R = 0.00000$

c
a
A
B
D
E
C
R

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.24323

D = 0.68559

E = 0.86181

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 1.86265

$\frac{D \cdot E \cdot (C^2+1)}{(D+E) \cdot (1-ac \cdot C)} - R = 0.00000$

c

a

B

A

D

E

C

R

Unit = 1.00000
A = 0.42728
B = 0.23175
C = 1.10804
D = 0.81836
E = 0.50212

$\frac{B}{A} = 0.54237$

ac = 0.54237

R = 1.73734

$\frac{D \cdot E \cdot (C^2+1)}{(D+E) \cdot (1-ac \cdot C)} - R = 0.00000$

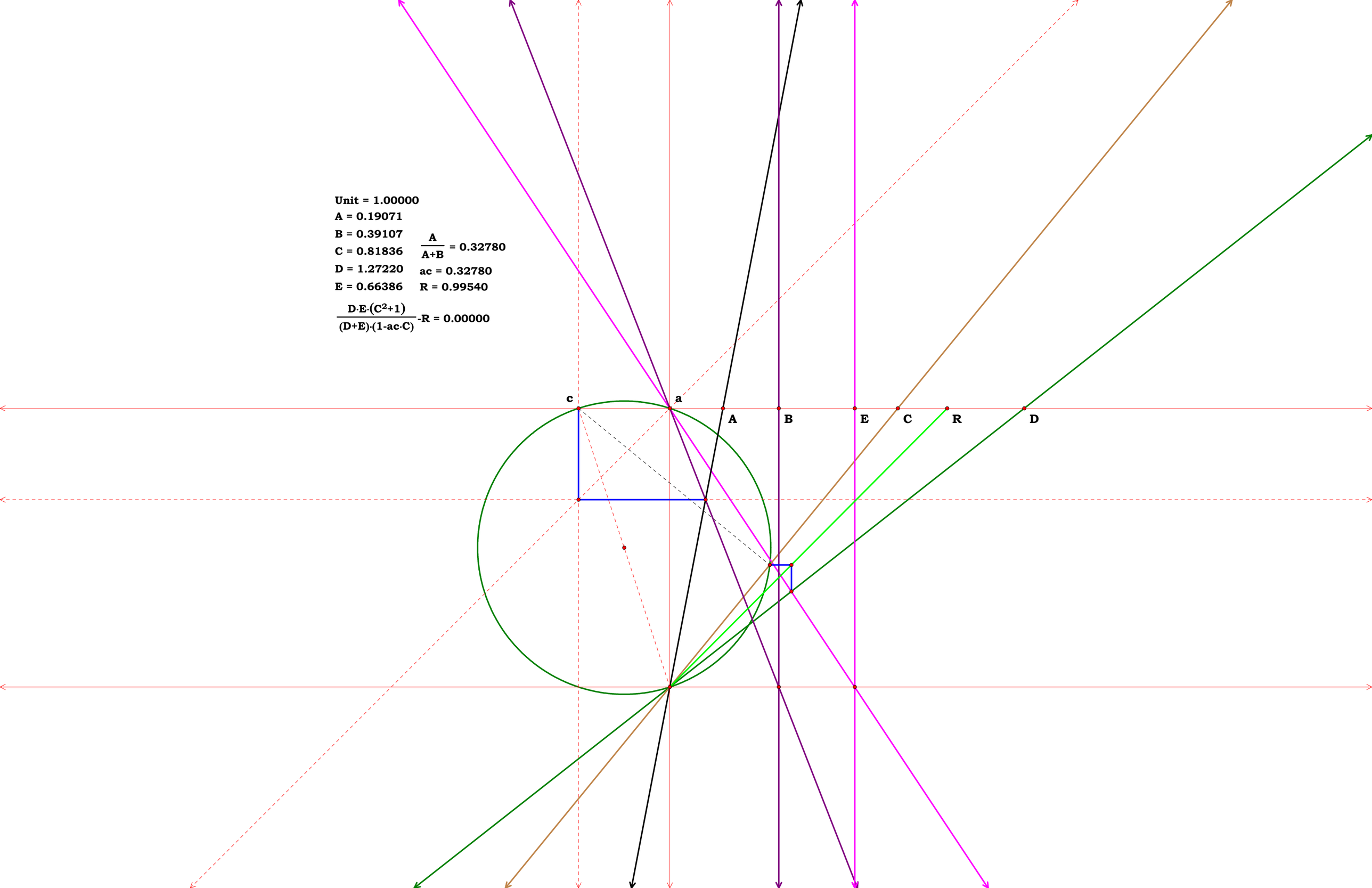
c a B A E D C R

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.81836
D = 1.27220
E = 0.66386

$\frac{A}{A+B} = 0.32780$

ac = 0.32780
R = 0.99540

$\frac{D \cdot E \cdot (C^2+1)}{(D+E) \cdot (1-ac \cdot C)} - R = 0.00000$



Unit = 1.00000
A = 0.22451
B = 0.41280
C = 0.83526
D = 0.70731
E = 0.55764

$\frac{D \cdot E \cdot (C^2+1)}{(D+E) \cdot (1-ac \cdot C)}$ -R = 0.00000

$\frac{B}{A+B}$ = 0.64773

ac = 0.64773

R = 1.15331

c a A B E D C R

Unit = 1.00000

A = 0.19071

B = 0.43935

C = 1.01872

D = 0.70731

E = 0.86181

$\frac{A}{B}$ = 0.43407

ac = 0.43407

R = 1.41920

$\frac{D \cdot E \cdot (C^2+1)}{(D+E) \cdot (1-ac \cdot C)}$ - R = 0.00000

c

a

A

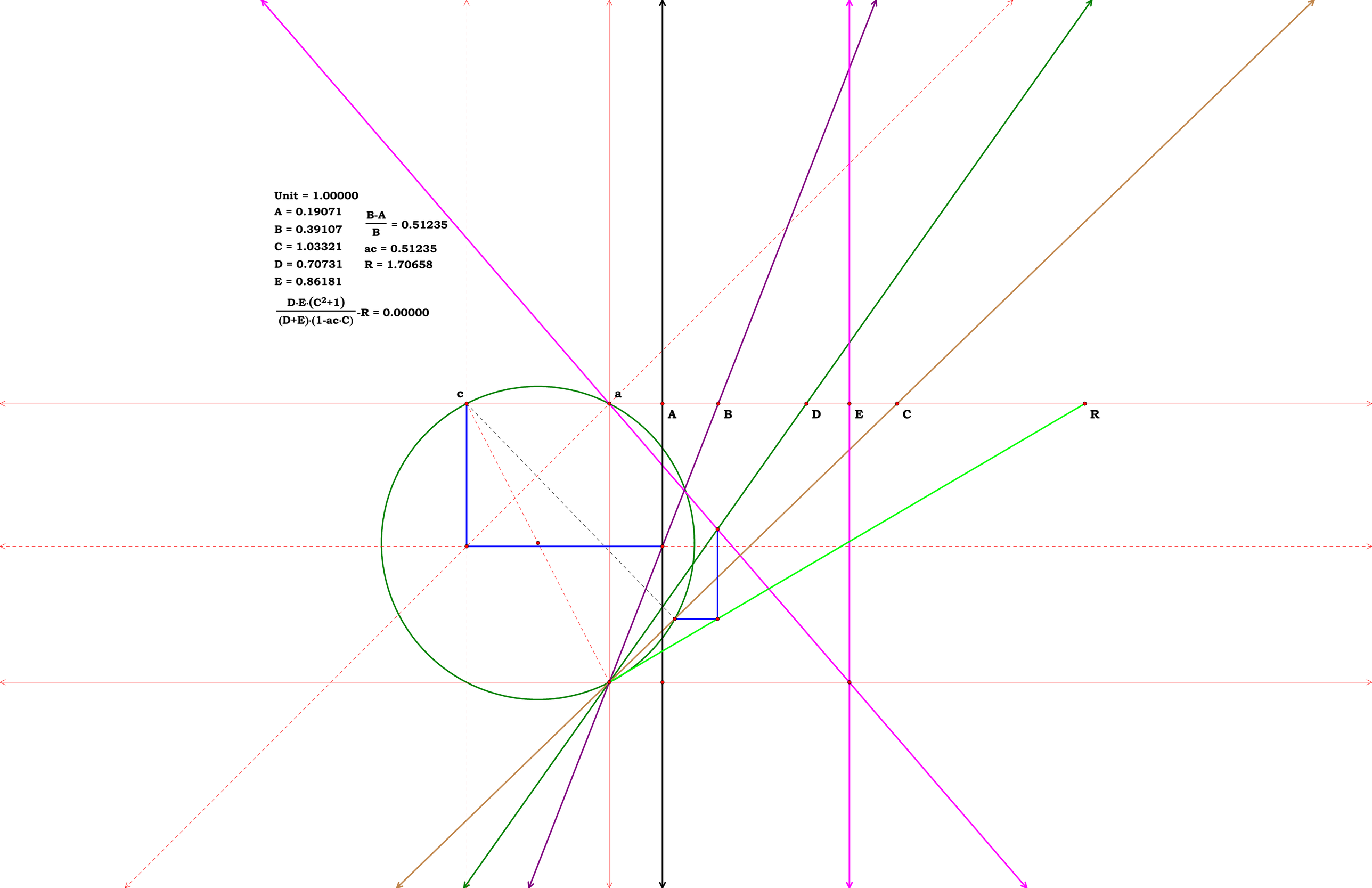
B

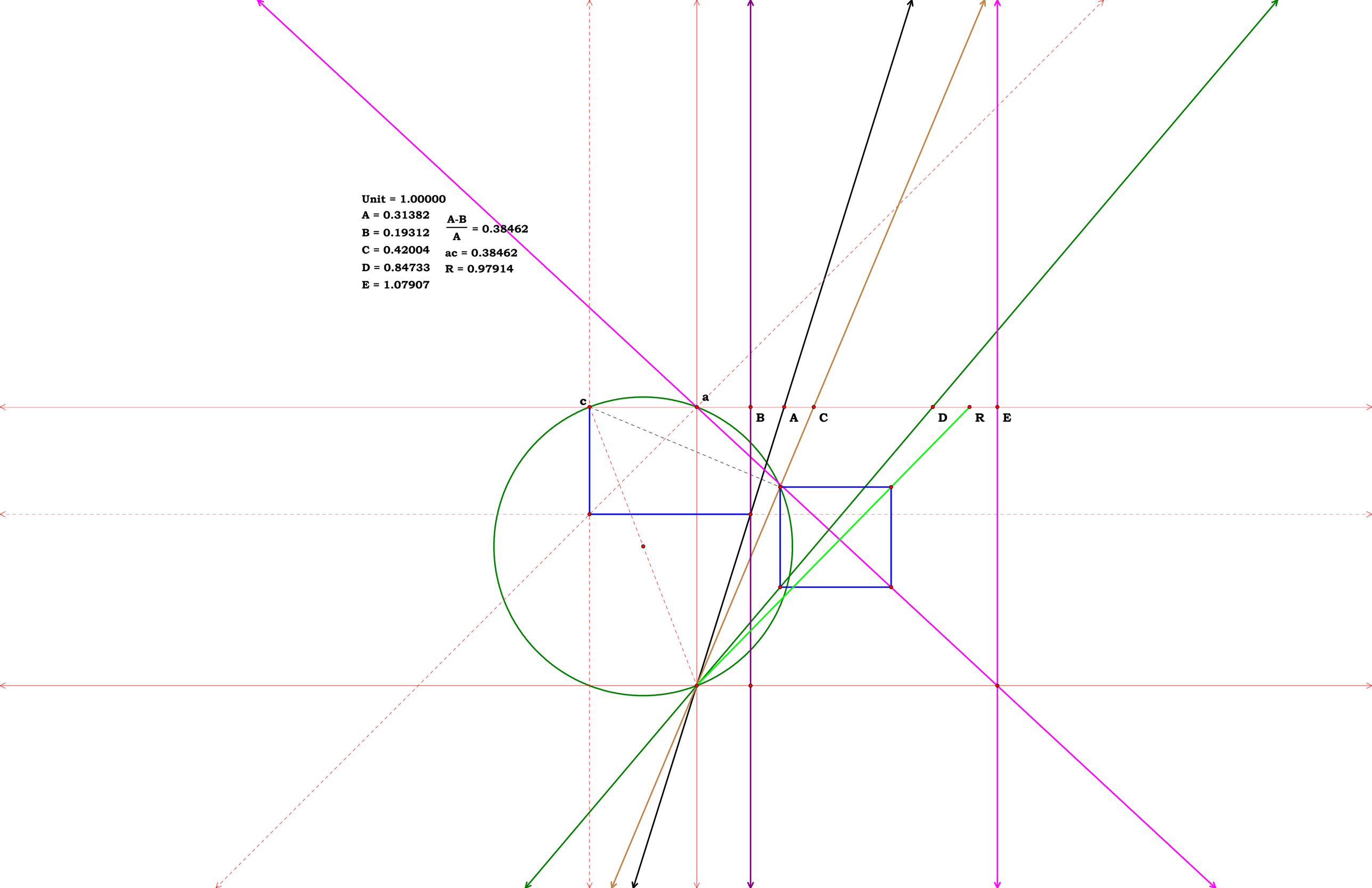
D

E

C

R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.03321
D = 0.70731
E = 0.86181
(B-A)/B = 0.51235
ac = 0.51235
R = 1.70658
D·E·(C²+1)/((D+E)·(1-ac·C)) -R = 0.00000
c
a
A
B
D
E
C
R


Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.42004
D = 0.84733
E = 1.07907
A-B / A = 0.38462
ac = 0.38462
R = 0.97914
c
a
B
A
C
D
R
E

Unit = 1.00000
A = 0.33314
B = 0.17864
C = 0.27279
D = 0.51660
E = 0.86181

$\frac{B}{A} = 0.53623$

ac = 0.53623
R = 0.62952

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(1-ac\cdot C)}-R = 0.00000$

c a B C A D R E

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.29693
D = 0.98975
E = 0.67110

$\frac{A}{A+B} = 0.32780$

ac = 0.32780
R = 0.60768

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(1-ac\cdot C)}-R = 0.00000$

c a A C B R E D

Unit = 1.00000
A = 0.22451
B = 0.39107 $\frac{B}{A+B}$ = 0.63529
C = 0.42487 ac = 0.63529
D = 0.56006 R = 0.85783
E = 0.99941

$$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(1-ac\cdot C)}-R = 0.00000$$

c a A BC D R E

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.44901

D = 0.63489

E = 1.13460

$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 0.94314

$\frac{E\cdot\left((D-C)+C^2\cdot D+ac\cdot C^2\right)}{D\cdot(1-ac\cdot C)}$ -R = 0.00000

c

a

A

B

C

D

R

E

Unit = 1.00000

A = 0.19071

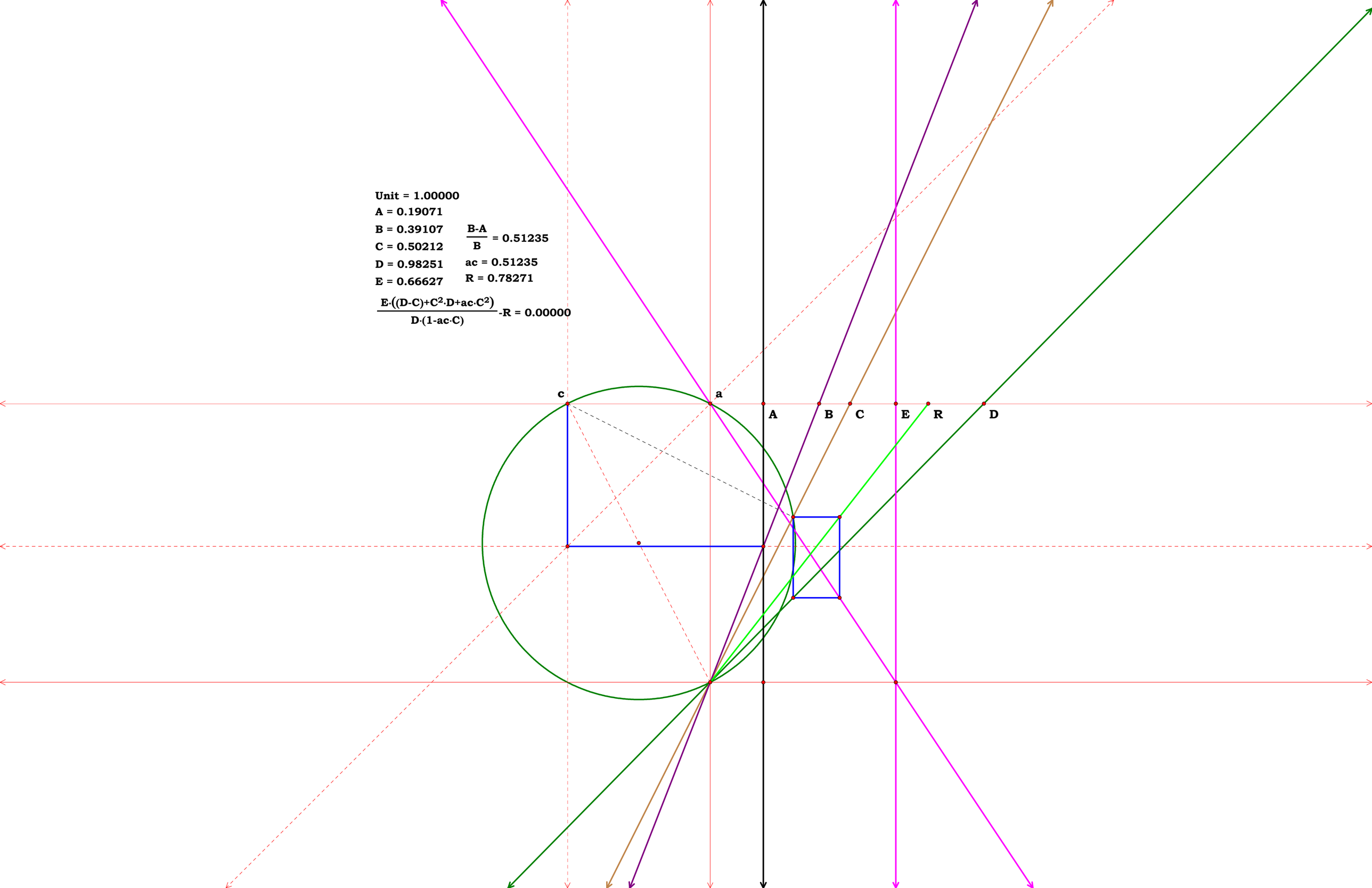
B = 0.39107 $\frac{B-A}{B}$ = 0.51235

C = 0.50212 ac = 0.51235

D = 0.98251 R = 0.78271

E = 0.66627

$\frac{E\cdot((D-C)+C^2\cdot D+ac\cdot C^2)}{D\cdot(1-ac\cdot C)}$ -R = 0.00000



Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.12735

D = 0.81594

E = 0.86181

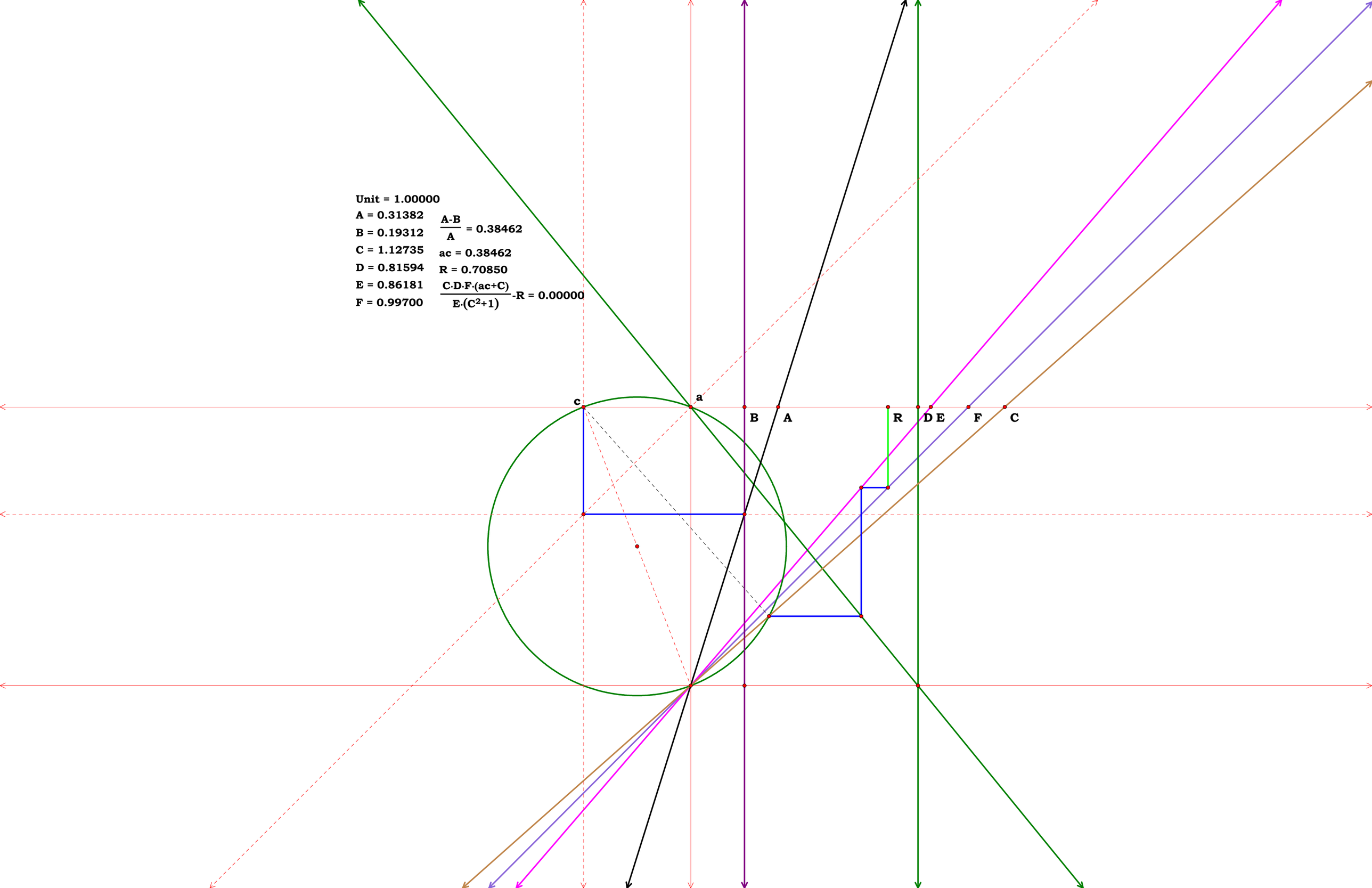
F = 0.99700

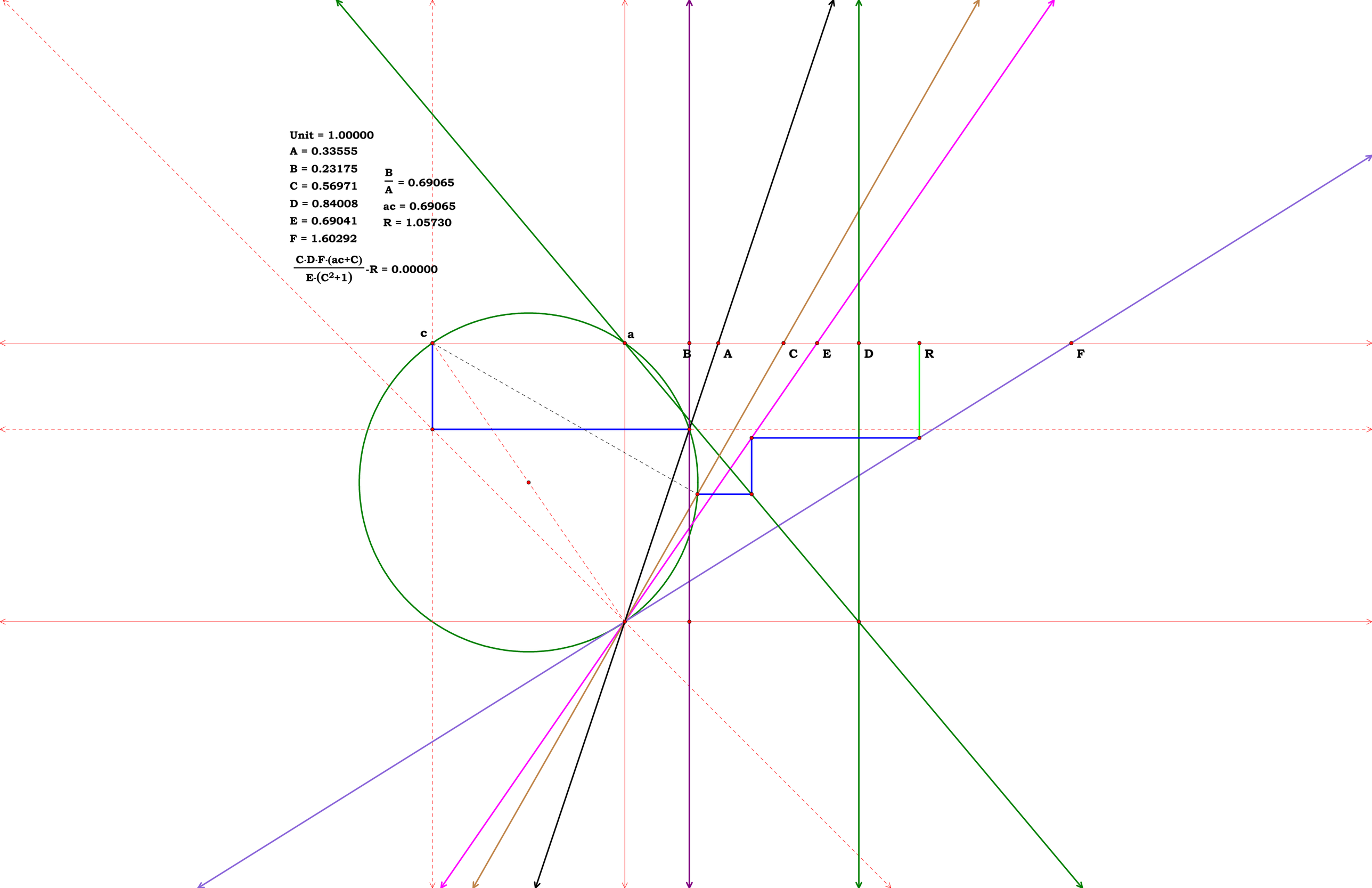
$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.70850

$\frac{C \cdot D \cdot F \cdot (ac+C)}{E \cdot (C^2+1)} - R = 0.00000$




Unit = 1.00000
A = 0.33555
B = 0.23175
C = 0.56971
D = 0.84008
E = 0.69041
F = 1.60292
B/A = 0.69065
ac = 0.69065
R = 1.05730
C·D·F·(ac+C) / E·(C²+1) -R = 0.00000
c
a
B
A
C
E
D
R
F

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.72421
D = 1.22633
E = 0.86181
F = 1.96985

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

$\frac{C \cdot D \cdot F \cdot (ac+C)}{E \cdot (C^2+1)} - R = 0.00000$

R = 1.40085

c a A B C E D R F

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.76284
D = 0.64213
E = 1.15632
F = 1.48222

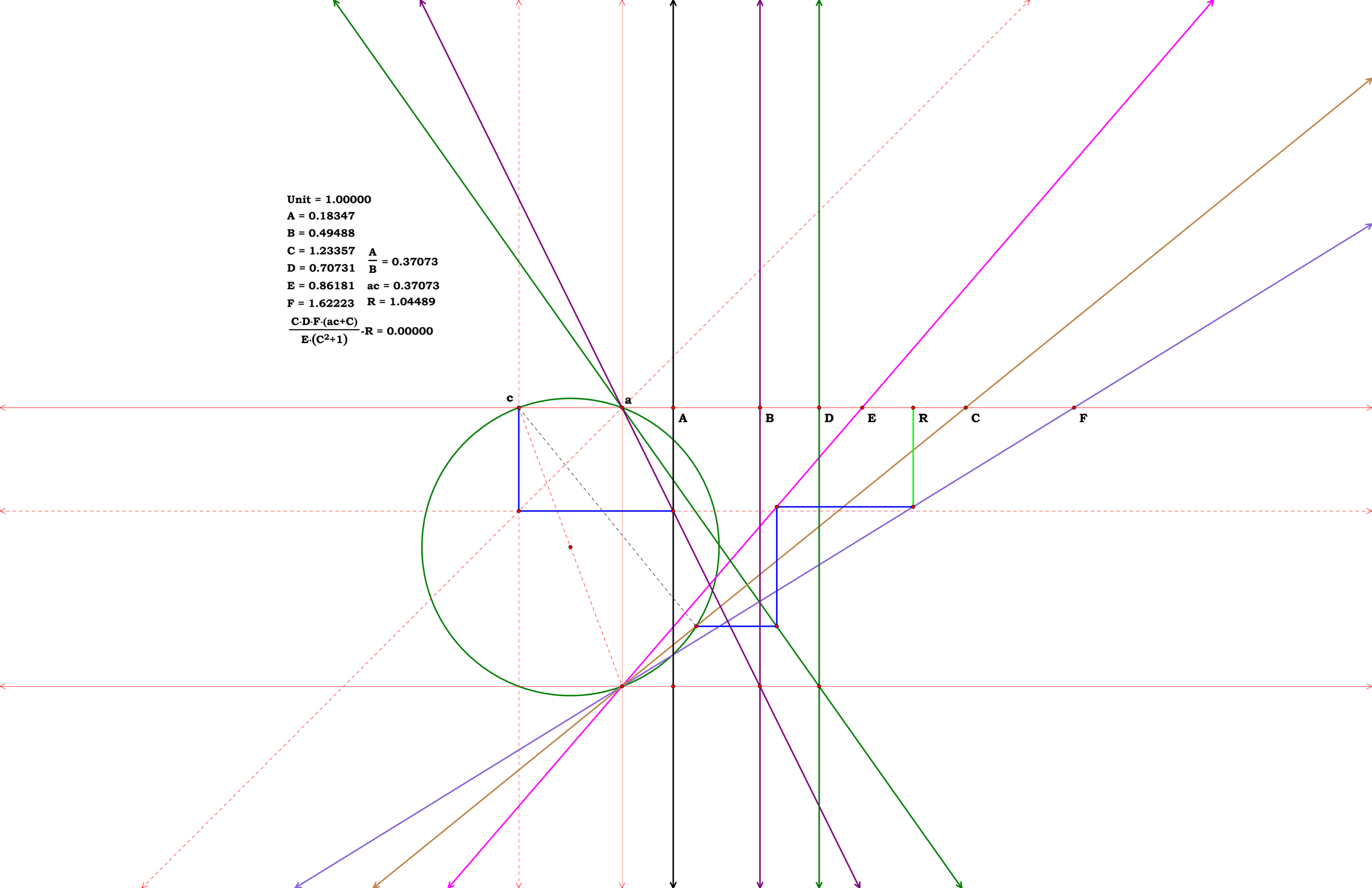
$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 0.55495

$\frac{C \cdot D \cdot F \cdot (ac+C)}{E \cdot (C^2+1)} - R = 0.00000$

c a A B R D C E F


Unit = 1.00000
A = 0.18347
B = 0.49488
C = 1.23357
D = 0.70731
E = 0.86181
F = 1.62223
A/B = 0.37073
ac = 0.37073
R = 1.04489
C·D·F·(ac+C) / E·(C²+1) -R = 0.00000
c
a
A
B
D
E
R
C
F

Unit = 1.00000
A = 0.28727
B = 0.39107
C = 1.34220
D = 0.70731
E = 0.86181
F = 1.61258

$\frac{B-A}{B}$ = 0.26543

ac = 0.26543

R = 1.01937

$\frac{C \cdot D \cdot F \cdot (ac+C)}{E \cdot (C^2+1)}$ -R = 0.00000

c a A B D E R C F

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.24806

D = 0.70731

E = 0.86181

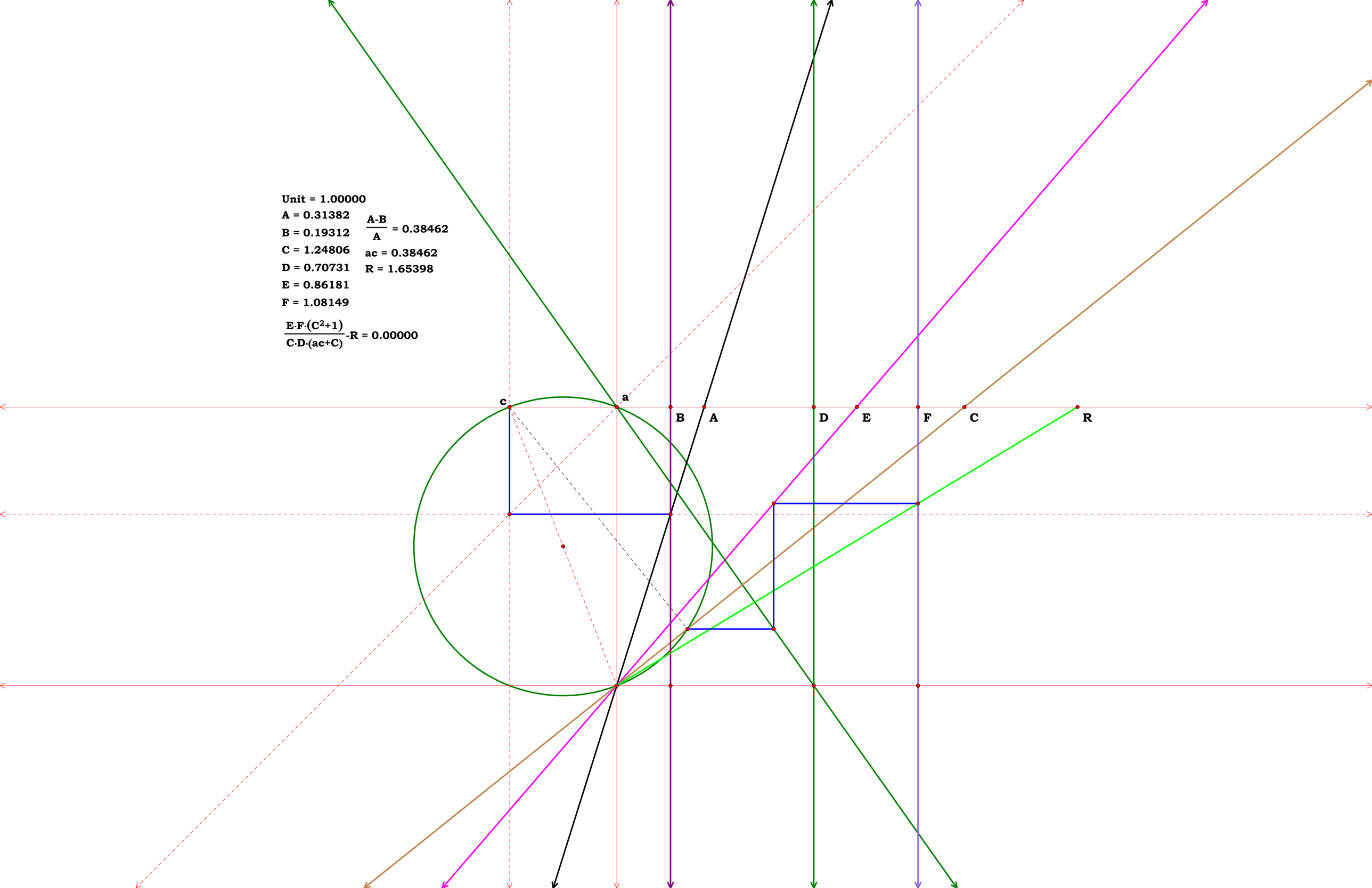
F = 1.08149

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 1.65398

$\frac{E \cdot F \cdot (C^2+1)}{C \cdot D \cdot (ac+C)} - R = 0.00000$



Unit = 1.00000

A = 0.33072

B = 0.23175

C = 0.55764

D = 0.85698

E = 0.74111

F = 1.08149

$\frac{B}{A}$ = 0.70073

ac = 0.70073

R = 1.74726

$\frac{E \cdot F \cdot (C^2+1)}{C \cdot D \cdot (ac+C)}$ -R = 0.00000

c

a

B

A

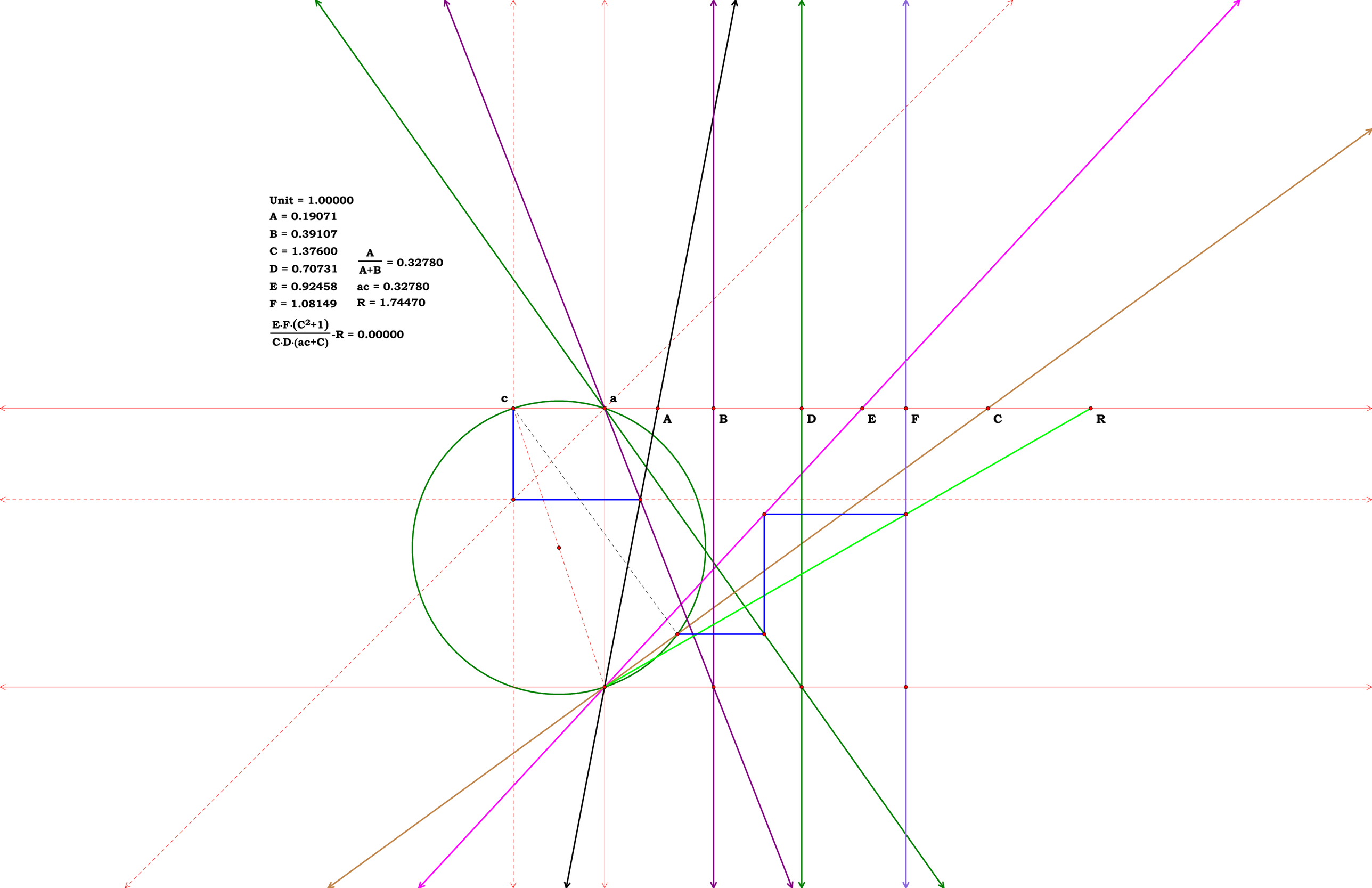
C

E

D

F

R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.37600
D = 0.70731
E = 0.92458
F = 1.08149
A/(A+B) = 0.32780
ac = 0.32780
R = 1.74470
E·F·(C²+1)/(C·D·(ac+C)) - R = 0.00000
c
a
A
B
D
E
F
C
R

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.94147
D = 0.70731
E = 0.76284
F = 1.08149

$\frac{B}{A+B} = 0.63529$

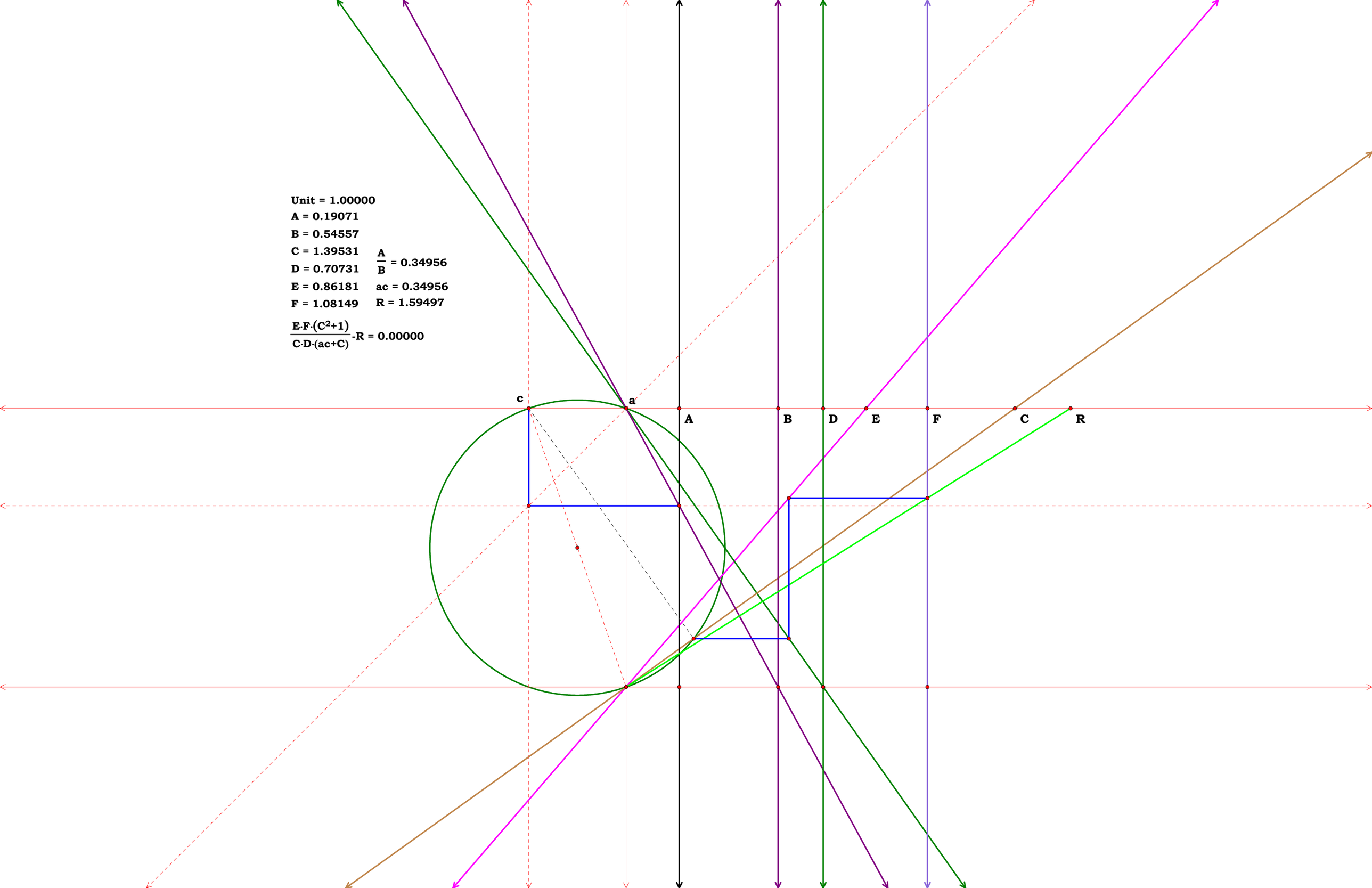
ac = 0.63529
R = 1.48215

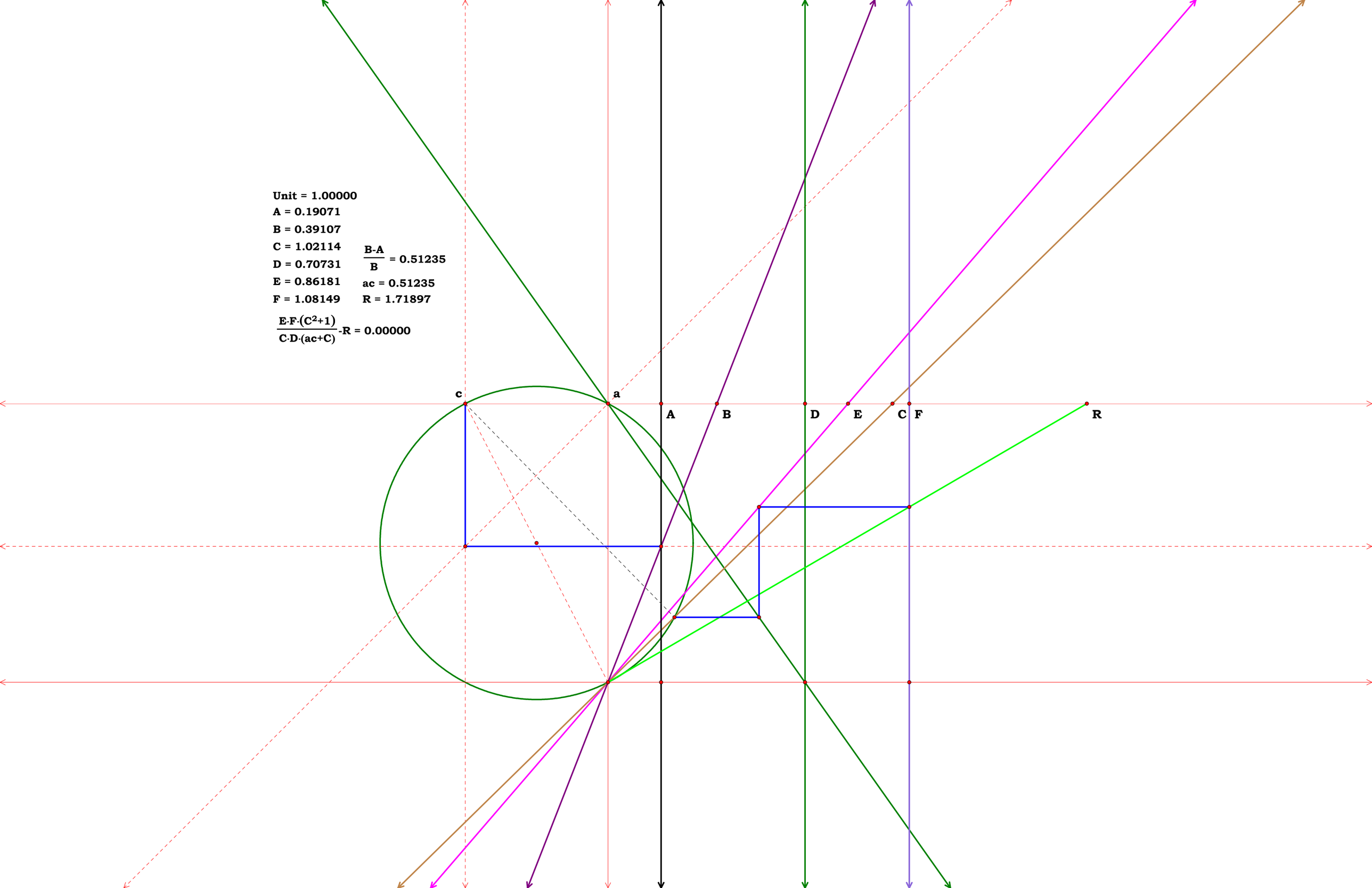
$\frac{E \cdot F \cdot (C^2+1)}{C \cdot D \cdot (ac+C)} - R = 0.00000$

c a A B D E C F R

Unit = 1.00000
A = 0.19071
B = 0.54557
C = 1.39531 $\frac{A}{B}$ = 0.34956
D = 0.70731 ac = 0.34956
E = 0.86181 R = 1.59497
F = 1.08149

$\frac{E \cdot F \cdot (C^2+1)}{C \cdot D \cdot (ac+C)}$ -R = 0.00000




Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.02114
D = 0.70731
E = 0.86181
F = 1.08149
(B-A)/B = 0.51235
ac = 0.51235
R = 1.71897
E·F·(C²+1)/(C·D·(ac+C))-R = 0.00000
c
a
A
B
D
E
C
F
R

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.39531

D = 1.06942

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

$\frac{A-B}{A} = 0.38462$

ae = 0.38462

R = 0.71652

$\frac{C\cdot(ae-1)\cdot((ae+ac\cdot ae\cdot D)-1)}{((ae^2\cdot D^2+ae^2)-2\cdot ae)+1} - R = 0.00000$

c

a

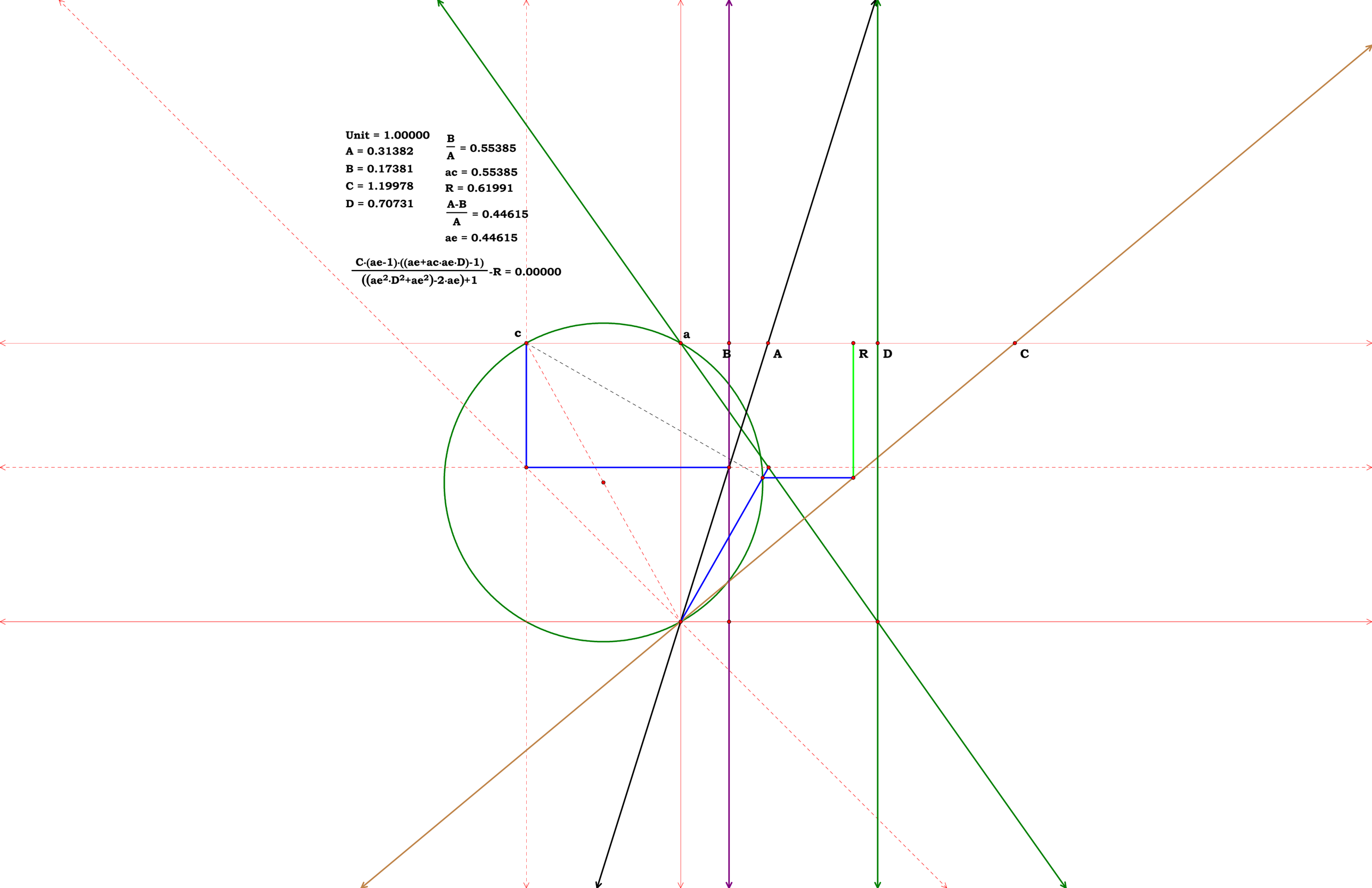
B

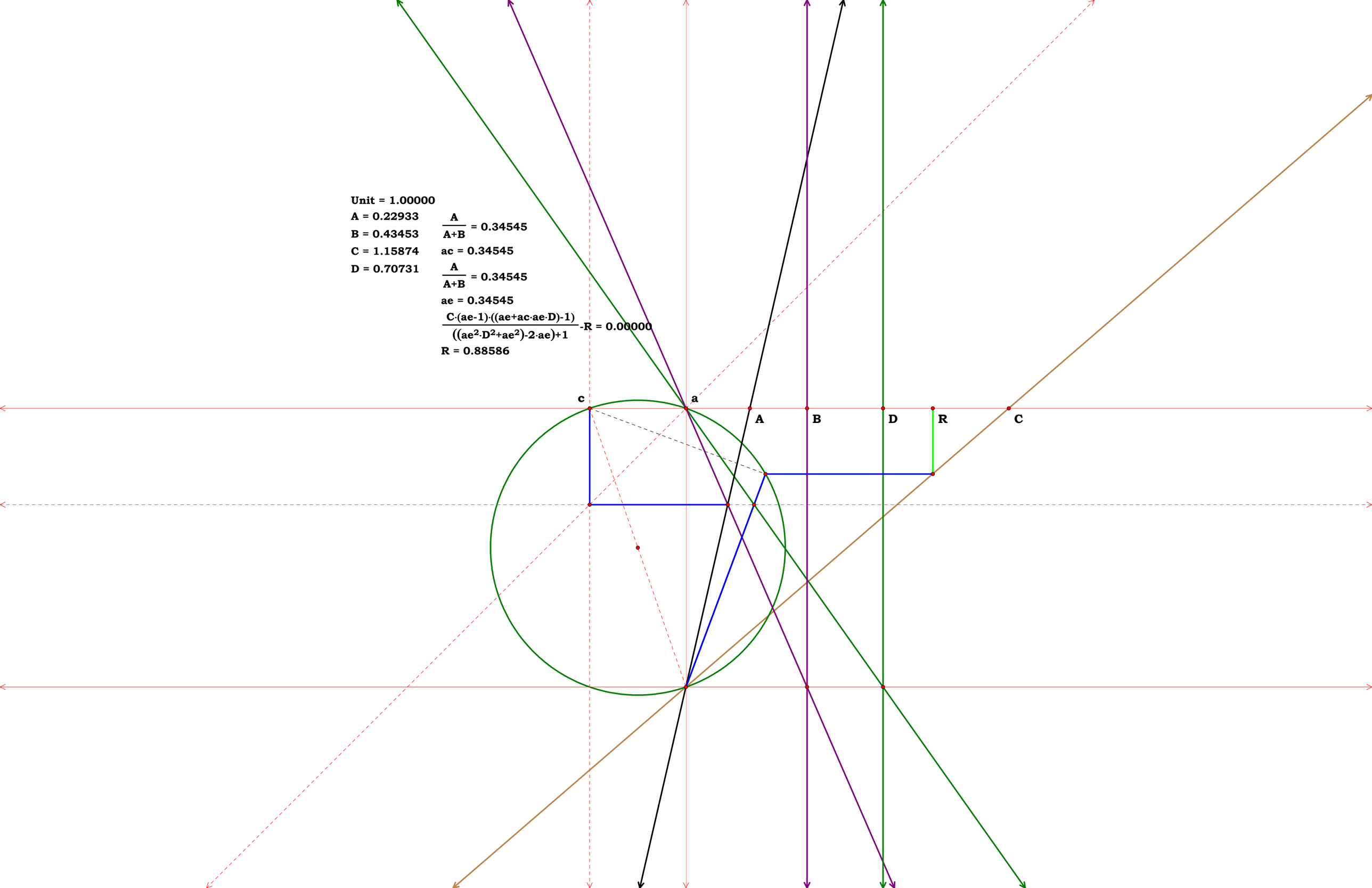
A

R

D

C


Unit = 1.00000
A = 0.31382
B = 0.17381
C = 1.19978
D = 0.70731
B/A = 0.55385
ac = 0.55385
R = 0.61991
(A-B)/A = 0.44615
ae = 0.44615
(C·(ae-1)·((ae+ac·ae·D)-1))/((ae²·D²+ae²)-2·ae)+1 -R = 0.00000
c
a
B
A
R
D
C


Unit = 1.00000
A = 0.22933
B = 0.43453
C = 1.15874
D = 0.70731
A / (A+B) = 0.34545
ac = 0.34545
A / (A+B) = 0.34545
ae = 0.34545
(C·(ae-1)·((ae+ac·ae·D)-1)) / (((ae²·D²+ae²)-2·ae)+1) -R = 0.00000
R = 0.88586
c
a
A
B
D
R
C

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 1.41945
D = 0.89319

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

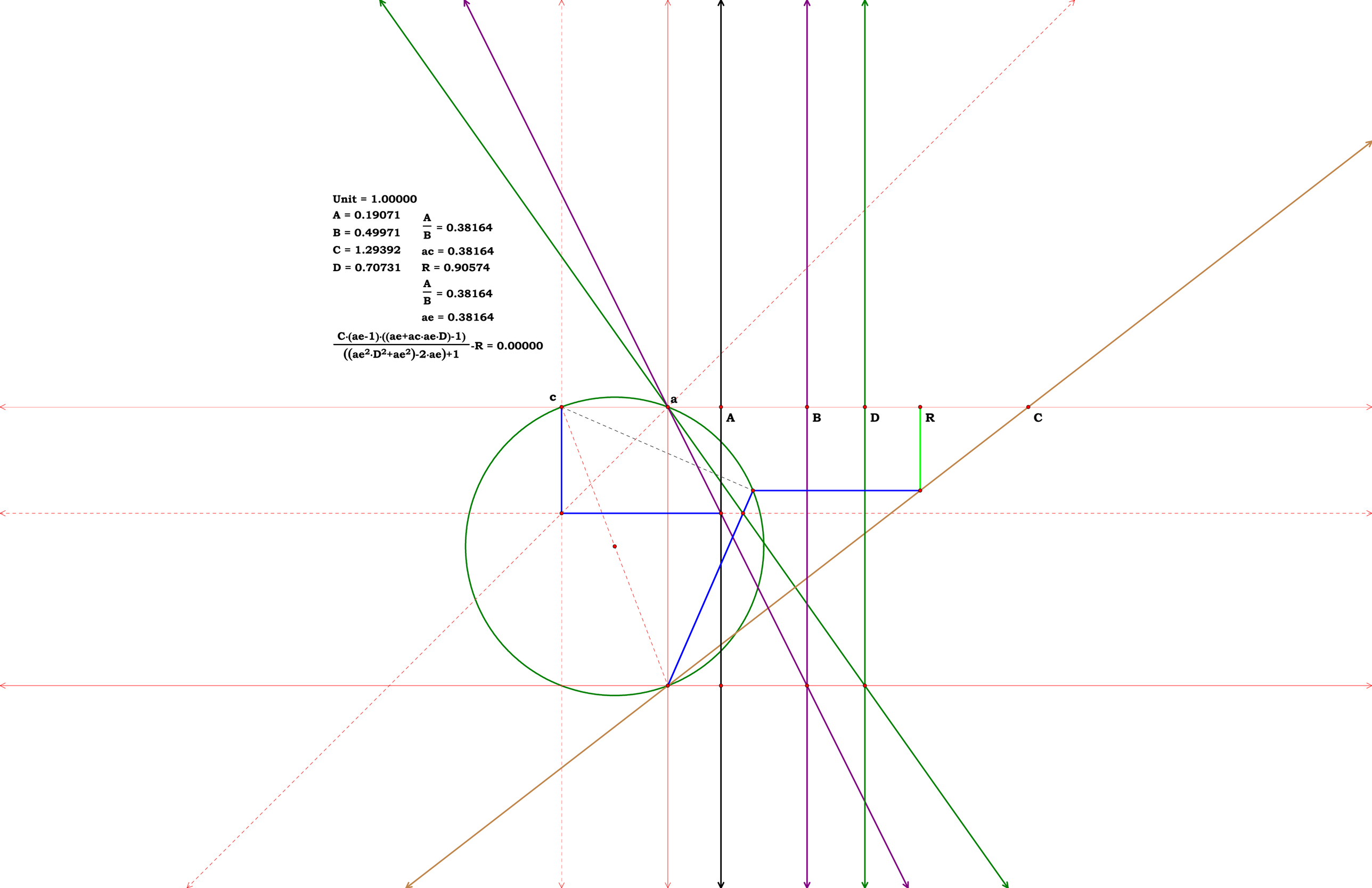
R = 0.75782

$\frac{A}{A+B} = 0.36471$

ae = 0.36471

$\frac{C\cdot(ae-1)\cdot((ae+ac\cdot ae\cdot D)-1)}{((ae^2\cdot D^2+ae^2)-2\cdot ae)+1} - R = 0.00000$

c
a
A
B
R
D
C


Unit = 1.00000
A = 0.19071
B = 0.49971
C = 1.29392
D = 0.70731
A/B = 0.38164
ac = 0.38164
R = 0.90574
A/B = 0.38164
ae = 0.38164
C·(ae-1)·((ae+ac·ae·D)-1) / ((ae²·D²+ae²)-2·ae)+1 -R = 0.00000
c
a
A
B
D
R
C

Unit = 1.00000
A = 0.30175
B = 0.39107
C = 2.13159
D = 0.70731

$\frac{B-A}{B} = 0.22840$

ac = 0.22840

$\frac{B-A}{B} = 0.22840$

ae = 0.22840

R = 1.94443

$\frac{C\cdot(ae-1)\cdot((ae+ac\cdot ae\cdot D)-1)}{((ae^2\cdot D^2+ae^2)-2\cdot ae)+1} - R = 0.00000$

c a A B D R C e

Unit = 1.00000

A = 0.39349

B = 0.19312

C = 1.23599

D = 0.85940

$\frac{A-B}{A}$ = 0.50920

ac = 0.50920

ae = 0.50920

R = 0.66830

$\frac{C \cdot D \cdot (ae-1) \cdot ((ae+ac \cdot ae \cdot D)-1)}{((ae \cdot ((2 \cdot C-2 \cdot D)+ac \cdot C \cdot D)-ae^2 \cdot ((C-D-D^3)+ac \cdot C \cdot D))+D)-C} - R = 0.00000$

c

a

B

A

R

D

C

Unit = 1.00000

A = 0.44418

B = 0.23175

C = 1.29634

D = 0.93182

$\frac{B}{A}$ = 0.52174

ac = 0.52174

R = 0.74982

$\frac{A-B}{A}$ = 0.47826

ae = 0.47826

$$\frac{C\cdot D\cdot(ae-1)\cdot((ae+ac\cdot ae\cdot D)-1)}{((ae\cdot((2\cdot C-2\cdot D)+ac\cdot C\cdot D)-ae^2\cdot((C-D-D^3)+ac\cdot C\cdot D))+D)-C}-R = 0.00000$$

c

a

B

A

R

D

C

Unit = 1.00000

A = 0.19071

B = 0.43935

C = 0.65420

D = 0.89319

$\frac{A}{A+B} = 0.30268$

ac = 0.30268

ae = 0.30268

R = 1.14608

$\frac{C \cdot D \cdot (ae-1) \cdot ((ae+ac \cdot ae \cdot D)-1)}{((ae \cdot (2 \cdot (C-D)+ac \cdot C \cdot D)-ae^2 \cdot ((C-D-D^3)+ac \cdot C \cdot D))+D)-C} - R = 0.00000$

c

a

A

B

C

D

R

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.91975

D = 0.82560

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

$\frac{A}{A+B} = 0.36471$

ae = 0.36471

$\frac{C \cdot D \cdot (ae-1) \cdot ((ae+ac \cdot ae \cdot D)-1)}{((ae \cdot (2 \cdot (C-D)+ac \cdot C \cdot D)-ae^2 \cdot ((C-D-D^3)+ac \cdot C \cdot D))+D)-C} - R = 0.00000$

R = 1.44116

c

a

A

B

D

C

R

Unit = 1.00000

A = 0.19071

B = 0.43694

C = 1.02838

D = 0.81836

$\frac{A}{B} = 0.43646$

ac = 0.43646

R = 1.50970

$\frac{A}{B} = 0.43646$

ae = 0.43646

$$\frac{C \cdot D \cdot (ae-1) \cdot ((ae+ac \cdot ae \cdot D)-1)}{((ae \cdot (2 \cdot (C-D)+ac \cdot C \cdot D)-ae^2 \cdot ((C-D-D^3)+ac \cdot C \cdot D))+D)-C} \quad R = 0.00000$$

c

a

A

B

D

C

R

Unit = 1.00000

A = 0.19071

B = 0.33555

C = 1.36152

D = 0.92940

$\frac{B-A}{B} = 0.43165$

ac = 0.43165

$\frac{B-A}{B} = 0.43165$

ae = 0.43165

R = 1.97353

$\frac{C \cdot D \cdot (ae-1) \cdot ((ae+ac \cdot ae \cdot D)-1)}{((ae \cdot (2 \cdot (C-D)+ac \cdot C \cdot D)-ae^2 \cdot ((C-D-D^3)+ac \cdot C \cdot D))+D)-C} - R = 0.00000$

c

a

A

B

D

C

R

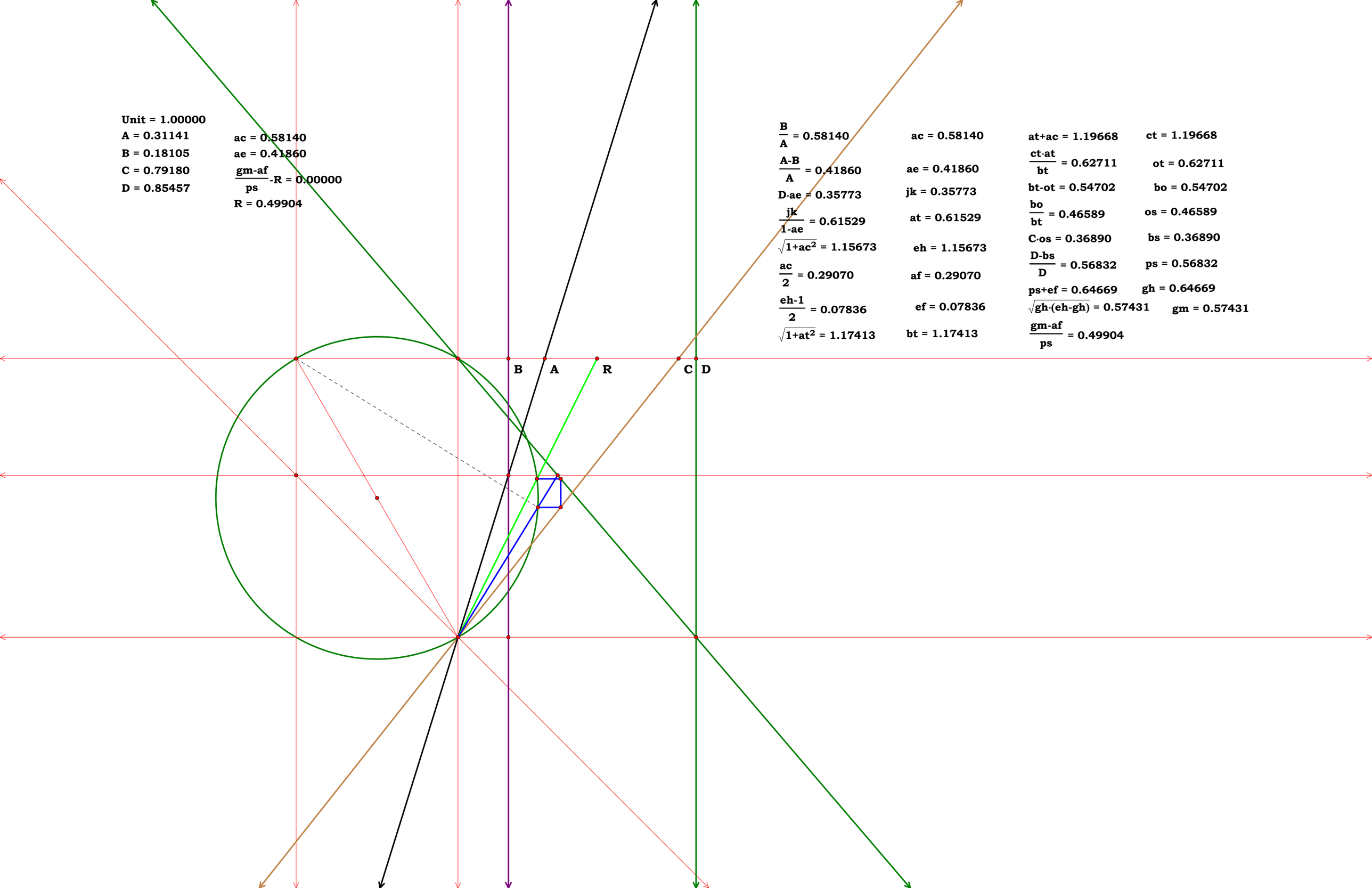
Unit = 1.00000
A = 0.35004
B = 0.17381
C = 1.34945
D = 0.89078

ac = 0.50345
ae = 0.50345
$\frac{gm-af}{ps}$-R = 0.00000
R = 0.56191

$\frac{A-B}{A}$ = 0.50345 ac = 0.50345
$\frac{A-B}{A}$ = 0.50345 ae = 0.50345
D·ae = 0.44846 jk = 0.44846
$\frac{jk}{1-ae}$ = 0.90315 at = 0.90315
$\sqrt{1+ac^2}$ = 1.11958 eh = 1.11958
$\frac{ac}{2}$ = 0.25172 af = 0.25172
$\frac{eh-1}{2}$ = 0.05979 ef = 0.05979
$\sqrt{1+at^2}$ = 1.34747 bt = 1.34747

at+ac = 1.40660 ct = 1.40660
$\frac{ct\cdot at}{bt}$ = 0.94278 ot = 0.94278
bt-ot = 0.40469 bo = 0.40469
$\frac{bo}{bt}$ = 0.30033 os = 0.30033
C·os = 0.40528 bs = 0.40528
$\frac{D-bs}{D}$ = 0.54502 ps = 0.54502
ps+ef = 0.60481 gh = 0.60481
$\sqrt{gh\cdot(eh-gh)}$ = 0.55798 gm = 0.55798
$\frac{gm-af}{ps}$ = 0.56191

B A R D C



$\frac{B}{A} = 0.58140$ ac = 0.58140 at+ac = 1.19668 ct = 1.19668

$\frac{A-B}{A} = 0.41860$ ae = 0.41860 $\frac{ct \cdot at}{bt} = 0.62711$ ot = 0.62711

$D \cdot ae = 0.35773$ jk = 0.35773 bt-ot = 0.54702 bo = 0.54702

$\frac{jk}{1-ae} = 0.61529$ at = 0.61529 $\frac{bo}{bt} = 0.46589$ os = 0.46589

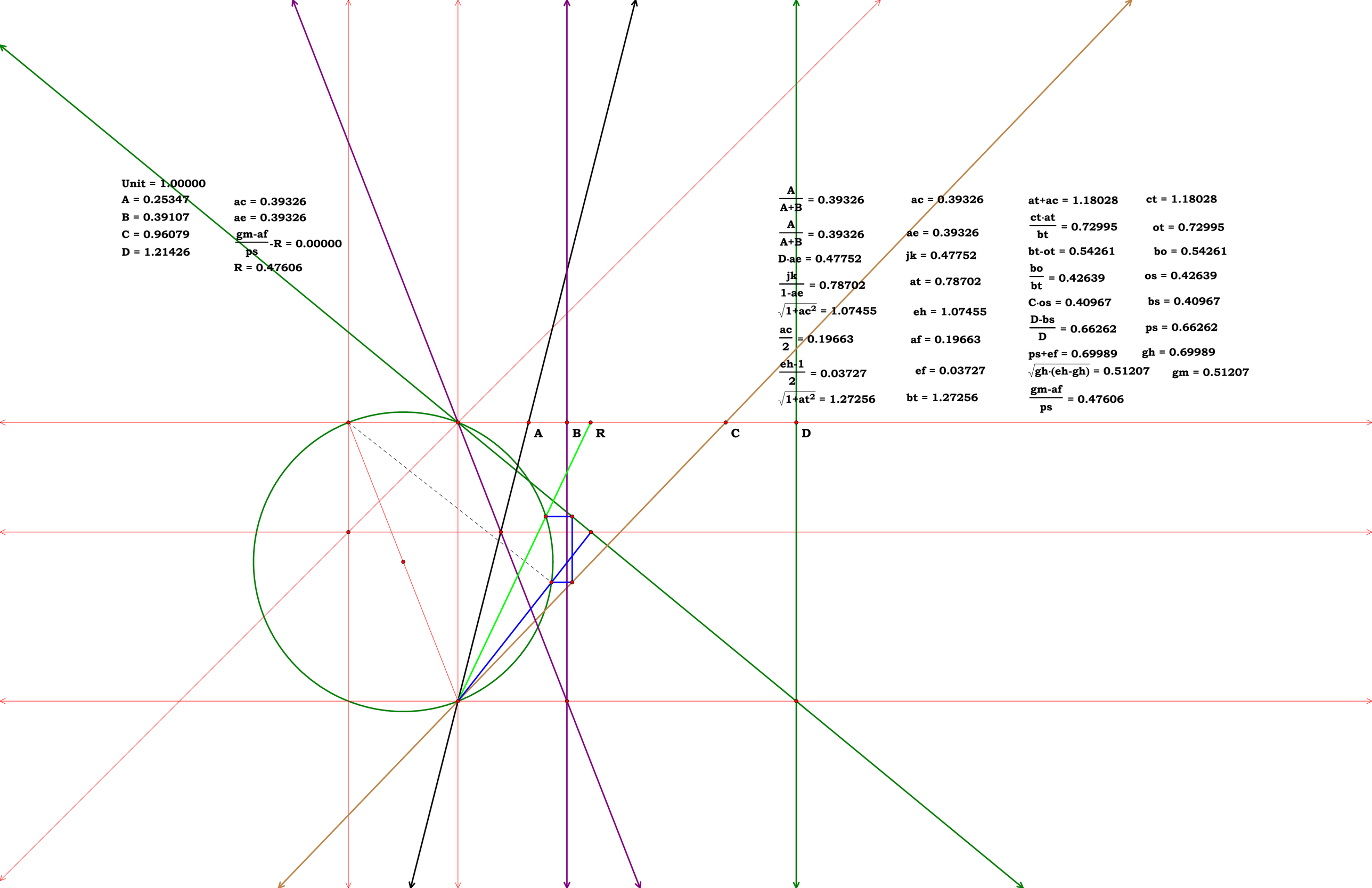
$\sqrt{1+ac^2} = 1.15673$ eh = 1.15673 $C \cdot os = 0.36890$ bs = 0.36890

$\frac{ac}{2} = 0.29070$ af = 0.29070 $\frac{D-bs}{D} = 0.56832$ ps = 0.56832

$\frac{eh-1}{2} = 0.07836$ ef = 0.07836 ps+ef = 0.64669 gh = 0.64669

$\sqrt{1+at^2} = 1.17413$ bt = 1.17413 $\sqrt{gh \cdot (eh-gh)} = 0.57431$ gm = 0.57431

$\frac{gm-af}{ps} = 0.49904$


Unit = 1.00000
A = 0.25347
B = 0.39107
C = 0.96079
D = 1.21426
ac = 0.39326
ae = 0.39326
gm-af / ps -R = 0.00000
R = 0.47606
A / A+B = 0.39326
A / A+B = 0.39326
D·ae = 0.47752
jk / 1-ae = 0.78702
√1+ac² = 1.07455
ac / 2 = 0.19663
eh-1 / 2 = 0.03727
√1+at² = 1.27256
ac = 0.39326
ae = 0.39326
jk = 0.47752
at = 0.78702
eh = 1.07455
af = 0.19663
ef = 0.03727
bt = 1.27256
at+ac = 1.18028
ct = 1.18028
ct·at / bt = 0.72995
ot = 0.72995
bt-ot = 0.54261
bo = 0.54261
bo / bt = 0.42639
os = 0.42639
C·os = 0.40967
bs = 0.40967
D-bs / D = 0.66262
ps = 0.66262
ps+ef = 0.69989
gh = 0.69989
√gh·(eh-gh) = 0.51207
gm = 0.51207
gm-af / ps = 0.47606
A
B
R
C
D

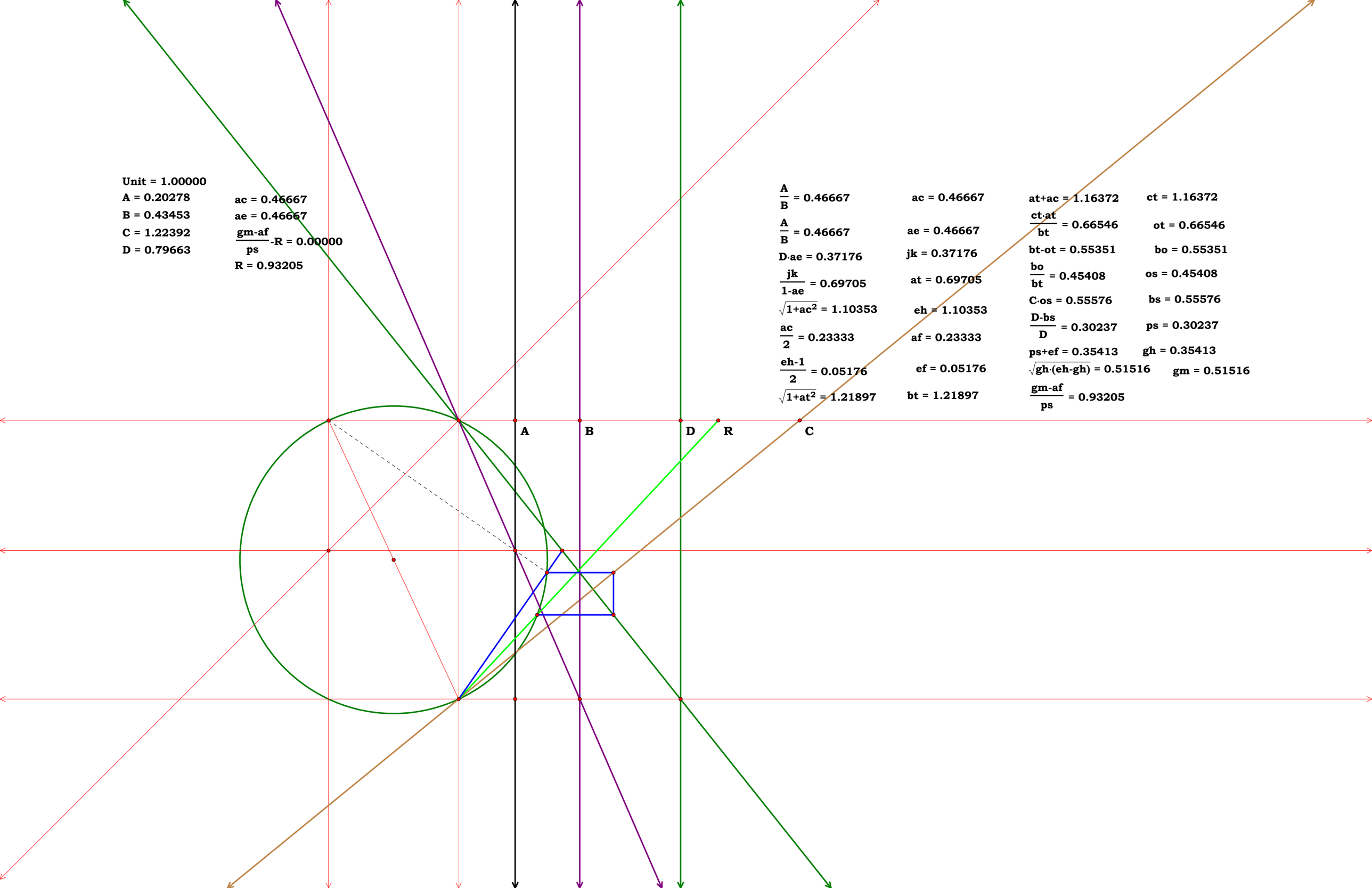
Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.06700
D = 0.87629

ac = 0.67220
ae = 0.32780
$\frac{gm-af}{ps}$-R = 0.00000
R = 0.82333

$\frac{B}{A+B}$ = 0.67220 ac = 0.67220
$\frac{A}{A+B}$ = 0.32780 ae = 0.32780
D·ae = 0.28725 jk = 0.28725
$\frac{jk}{1-ae}$ = 0.42733 at = 0.42733
$\sqrt{1+ac^2}$ = 1.20493 eh = 1.20493
$\frac{ac}{2}$ = 0.33610 af = 0.33610
$\frac{eh-1}{2}$ = 0.10246 ef = 0.10246
$\sqrt{1+at^2}$ = 1.08748 bt = 1.08748

at+ac = 1.09953 ct = 1.09953
$\frac{ct\cdot at}{bt}$ = 0.43206 ot = 0.43206
bt-ot = 0.65541 bo = 0.65541
$\frac{bo}{bt}$ = 0.60269 os = 0.60269
C·os = 0.64307 bs = 0.64307
$\frac{D-bs}{D}$ = 0.26614 ps = 0.26614
ps+ef = 0.36861 gh = 0.36861
$\sqrt{gh\cdot(eh-gh)}$ = 0.55522 gm = 0.55522
$\frac{gm-af}{ps}$ = 0.82333

A B R D C


Unit = 1.00000
A = 0.20278
B = 0.43453
C = 1.22392
D = 0.79663
ac = 0.46667
ae = 0.46667
gm-af / ps -R = 0.00000
R = 0.93205
A / B = 0.46667
ac = 0.46667
at+ac = 1.16372
ct = 1.16372
A / B = 0.46667
ae = 0.46667
ct·at / bt = 0.66546
ot = 0.66546
D·ae = 0.37176
jk = 0.37176
bt-ot = 0.55351
bo = 0.55351
jk / 1-ae = 0.69705
at = 0.69705
bo / bt = 0.45408
os = 0.45408
√1+ac² = 1.10353
eh = 1.10353
C·os = 0.55576
bs = 0.55576
ac / 2 = 0.23333
af = 0.23333
D-bs / D = 0.30237
ps = 0.30237
eh-1 / 2 = 0.05176
ef = 0.05176
ps+ef = 0.35413
gh = 0.35413
√1+at² = 1.21897
bt = 1.21897
√gh·(eh-gh) = 0.51516
gm = 0.51516
gm-af / ps = 0.93205
A
B
D
R
C

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.01872
D = 0.80629

ac = 0.51235
ae = 0.51235
$\frac{gm-af}{ps}$-R = 0.00000
R = 0.51292

$\frac{B-A}{B}$ = 0.51235
ac = 0.51235
at+ac = 1.35946
ct = 1.35946

$\frac{B-A}{B}$ = 0.51235
ae = 0.51235
$\frac{ct\cdot at}{bt}$ = 0.87871
ot = 0.87871

D·ae = 0.41310
jk = 0.41310
bt-ot = 0.43186
bo = 0.43186

$\frac{jk}{1-ae}$ = 0.84711
at = 0.84711
$\frac{bo}{bt}$ = 0.32952
os = 0.32952

$\sqrt{1+ac^2}$ = 1.12361
eh = 1.12361
C·os = 0.33569
bs = 0.33569

$\frac{ac}{2}$ = 0.25617
af = 0.25617
$\frac{D-bs}{D}$ = 0.58366
ps = 0.58366

$\frac{eh-1}{2}$ = 0.06180
ef = 0.06180
ps+ef = 0.64546
gh = 0.64546

$\sqrt{1+at^2}$ = 1.31057
bt = 1.31057
$\sqrt{gh\cdot(eh-gh)}$ = 0.55554
gm = 0.55554

$\frac{gm-af}{ps}$ = 0.51292

A B R D C

Unit = 1.00000

A = 0.24140

B = 0.18588

C = 0.58902

D = 0.85940

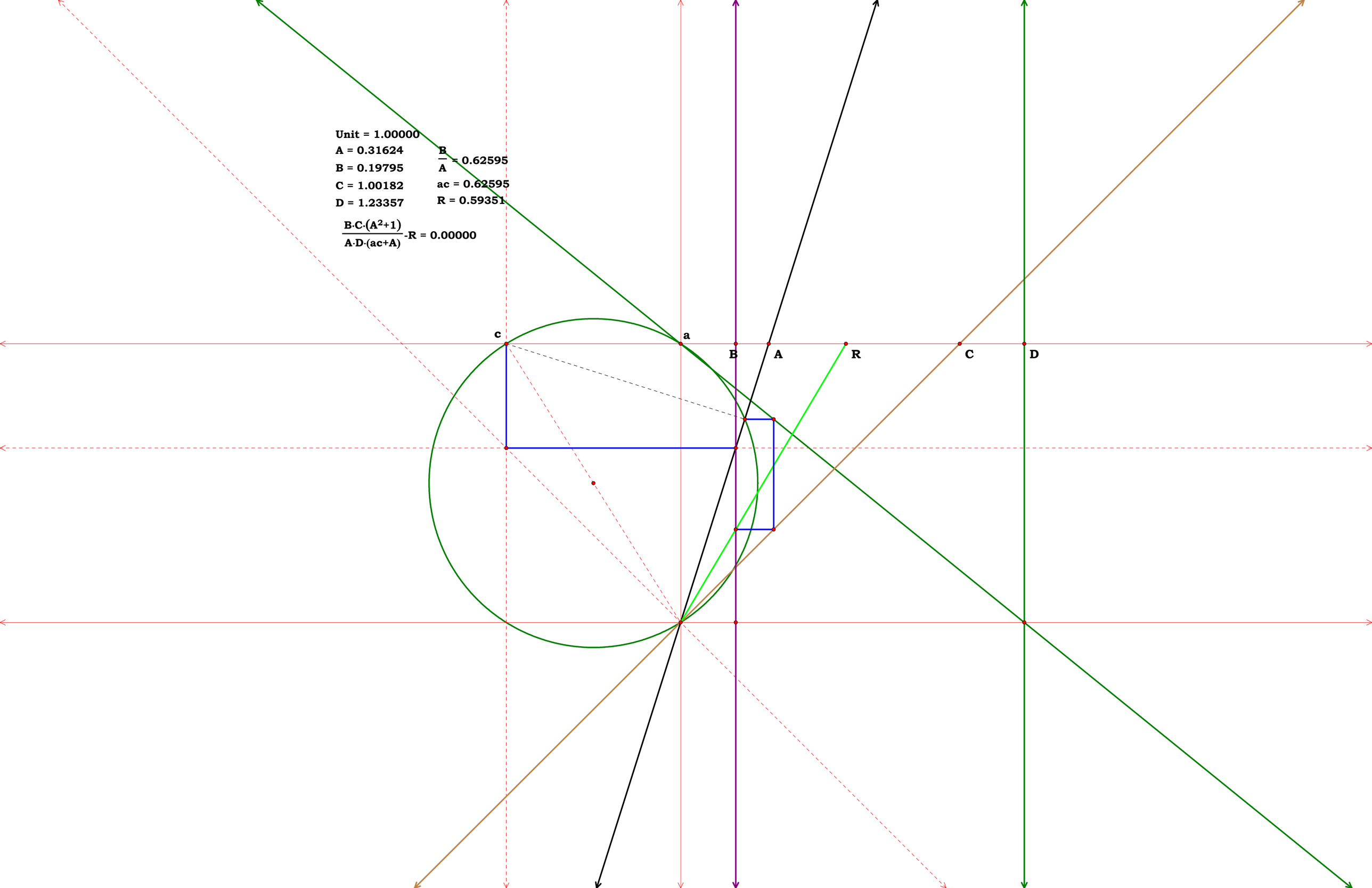
$\frac{A-B}{A}$ = 0.23000

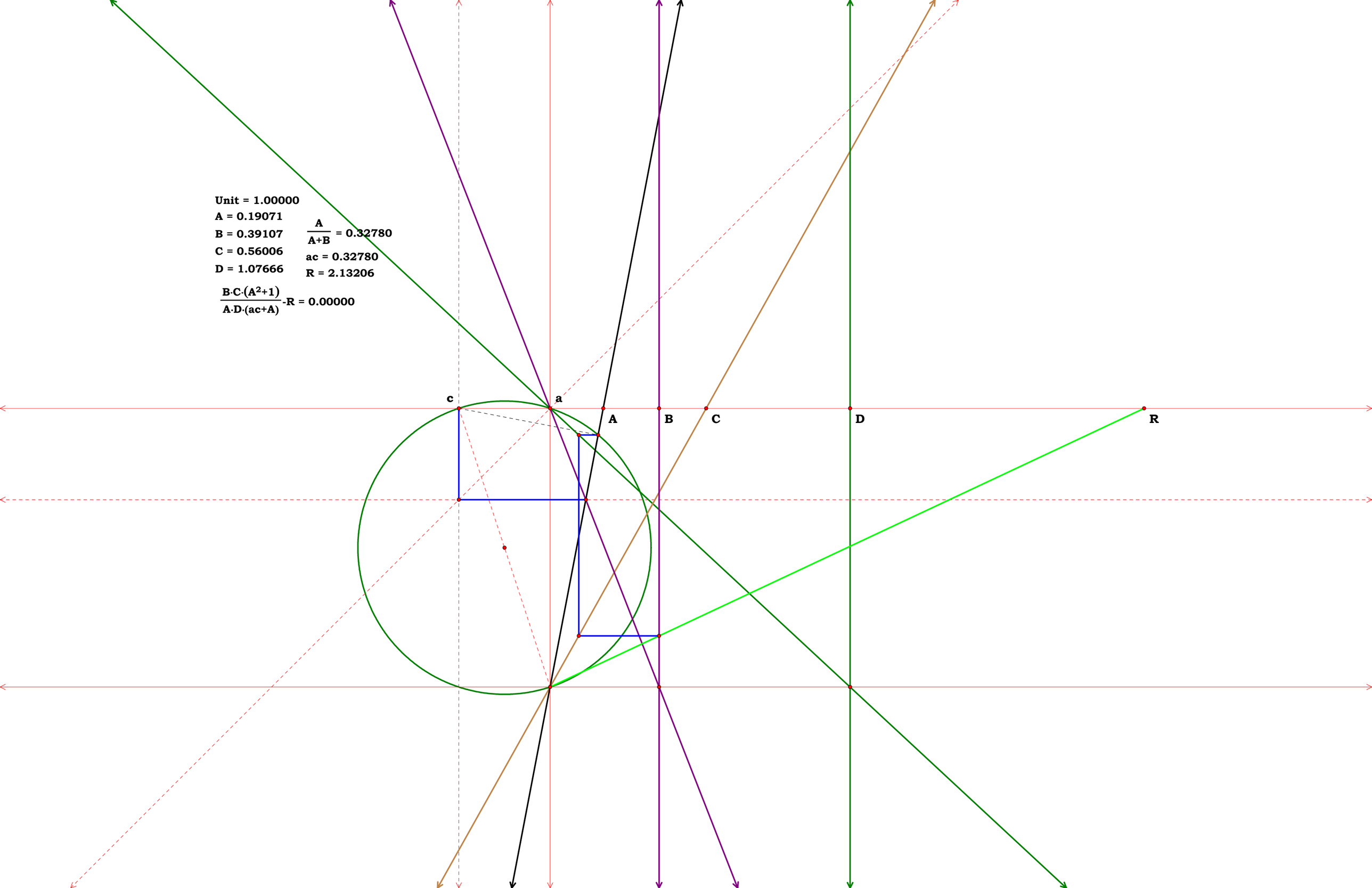
ac = 0.23000

R = 1.18478

$\frac{B \cdot C \cdot (A^2+1)}{A \cdot D \cdot (ac+A)}$ -R = 0.00000

c a B A C D R


Unit = 1.00000
A = 0.31624
B = 0.19795
C = 1.00182
D = 1.23357
B/A = 0.62595
ac = 0.62595
R = 0.59351
B·C·(A²+1) / A·D·(ac+A) -R = 0.00000
c
a
B
A
R
C
D


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.56006
D = 1.07666
A/(A+B) = 0.32780
ac = 0.32780
R = 2.13206
B·C·(A²+1)/(A·D·(ac+A)) -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.55764
D = 0.70731

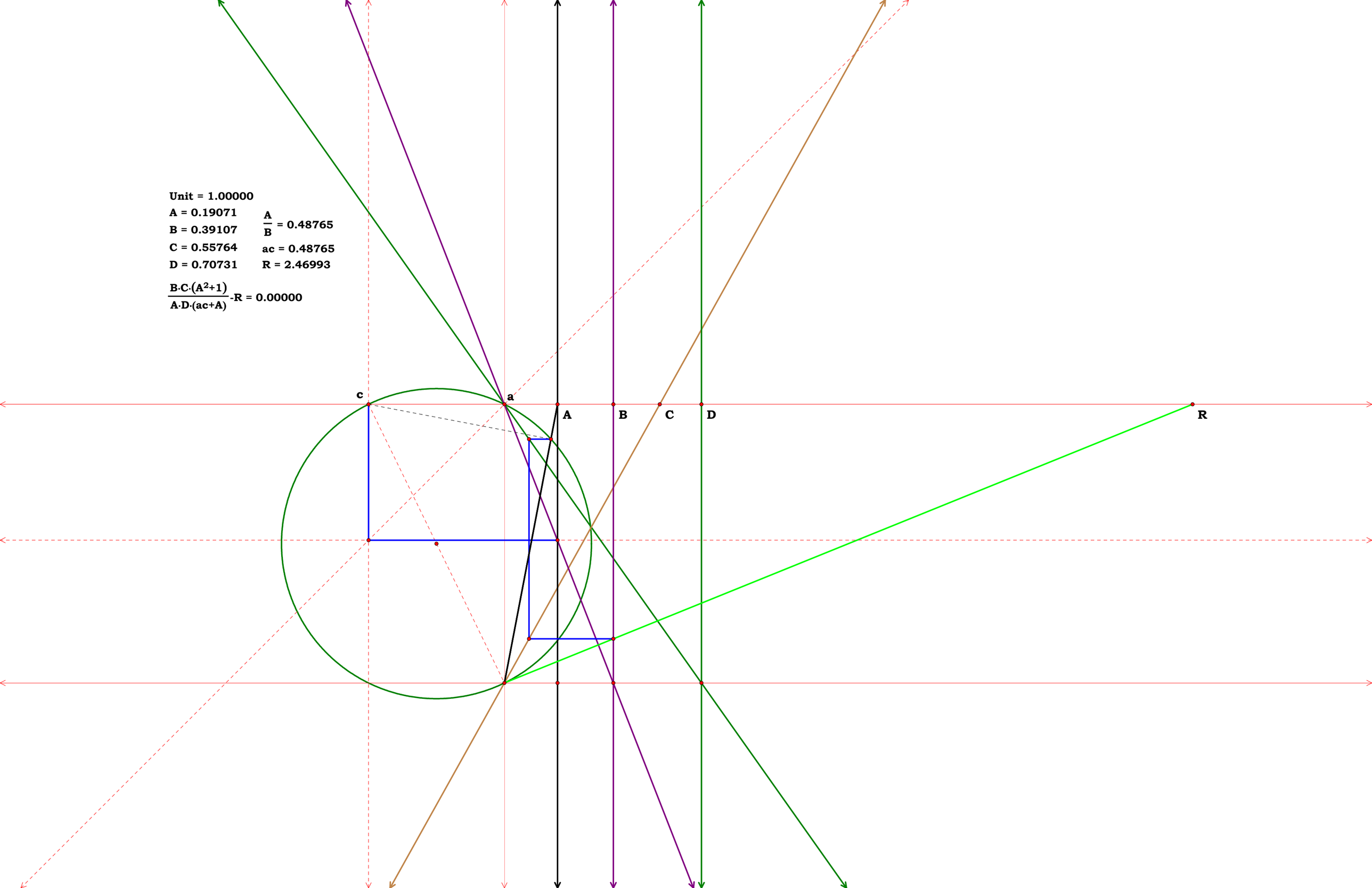
$\frac{B}{A+B}$ = 0.63529

ac = 0.63529

R = 1.67778

$\frac{B \cdot C \cdot (A^2+1)}{A \cdot D \cdot (ac+A)}$ - R = 0.00000

c a A B C D R


Unit = 1.00000
A = 0.19071
B = 0.39107
C = 0.55764
D = 0.70731
A/B = 0.48765
ac = 0.48765
R = 2.46993
B·C·(A²+1) / A·D·(ac+A) -R = 0.00000
c
a
A
B
C
D
R

Unit = 1.00000

A = 0.19071 $\quad \frac{B-A}{B} = 0.51235$

B = 0.39107

C = 0.55764 $\quad ac = 0.51235$

D = 0.70731 $\quad R = 2.38319$

$\frac{B \cdot C \cdot (A^2+1)}{A \cdot D \cdot (ac+A)} - R = 0.00000$

c a A B C D R

Unit = 1.00000

A = 0.32589

B = 0.19312

C = 0.92940

D = 0.68559

$\frac{A-B}{A} = 0.40741$

ac = 0.40741

$\frac{A-B}{A} = 0.40741$

ae = 0.40741

R = 1.86072

$\frac{B \cdot D \cdot ((ae^2 \cdot (D^2+1)-2 \cdot ae)+1)}{(ae^2 \cdot ((D^3+D)-C)+2 \cdot ae \cdot (C-D)+D)-C-ac \cdot ae \cdot C \cdot D \cdot (ae-1)} - R = 0.00000$

c

a

B

A

D

C

R

Unit = 1.00000

A = 0.35969

B = 0.22933

C = 0.95113

D = 0.83767

$\frac{B}{A}$ = 0.63758

ac = 0.63758

$\frac{A-B}{A}$ = 0.36242

ae = 0.36242

R = 0.64528

$$\frac{B\cdot D\cdot((ae^2\cdot(D^2+1)-2\cdot ae)+1)}{(ae^2\cdot((D^3+D)-C)+2\cdot ae\cdot(C-D)+D)-C-ac\cdot ae\cdot C\cdot D\cdot(ae-1)}-R = 0.00000$$

c

a

B

A

R

D

C

Unit = 1.00000
A = 0.19071
B = 0.39107
C = 1.18288
D = 1.27944

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

$\frac{A}{A+B} = 0.32780$

ae = 0.32780

$\frac{B \cdot D \cdot ((ae^2 \cdot (D^2+1) - 2 \cdot ae) + 1)}{(ae^2 \cdot ((D^3+D) - C) + 2 \cdot ae \cdot (C-D) + D) - C - ac \cdot ae \cdot C \cdot D \cdot (ae-1)} - R = 0.00000$

R = 0.83095

c a A B R C D

Unit = 1.00000
A = 0.22451
B = 0.39107
C = 0.66386
D = 1.05493

$\frac{B}{A+B} = 0.63529$

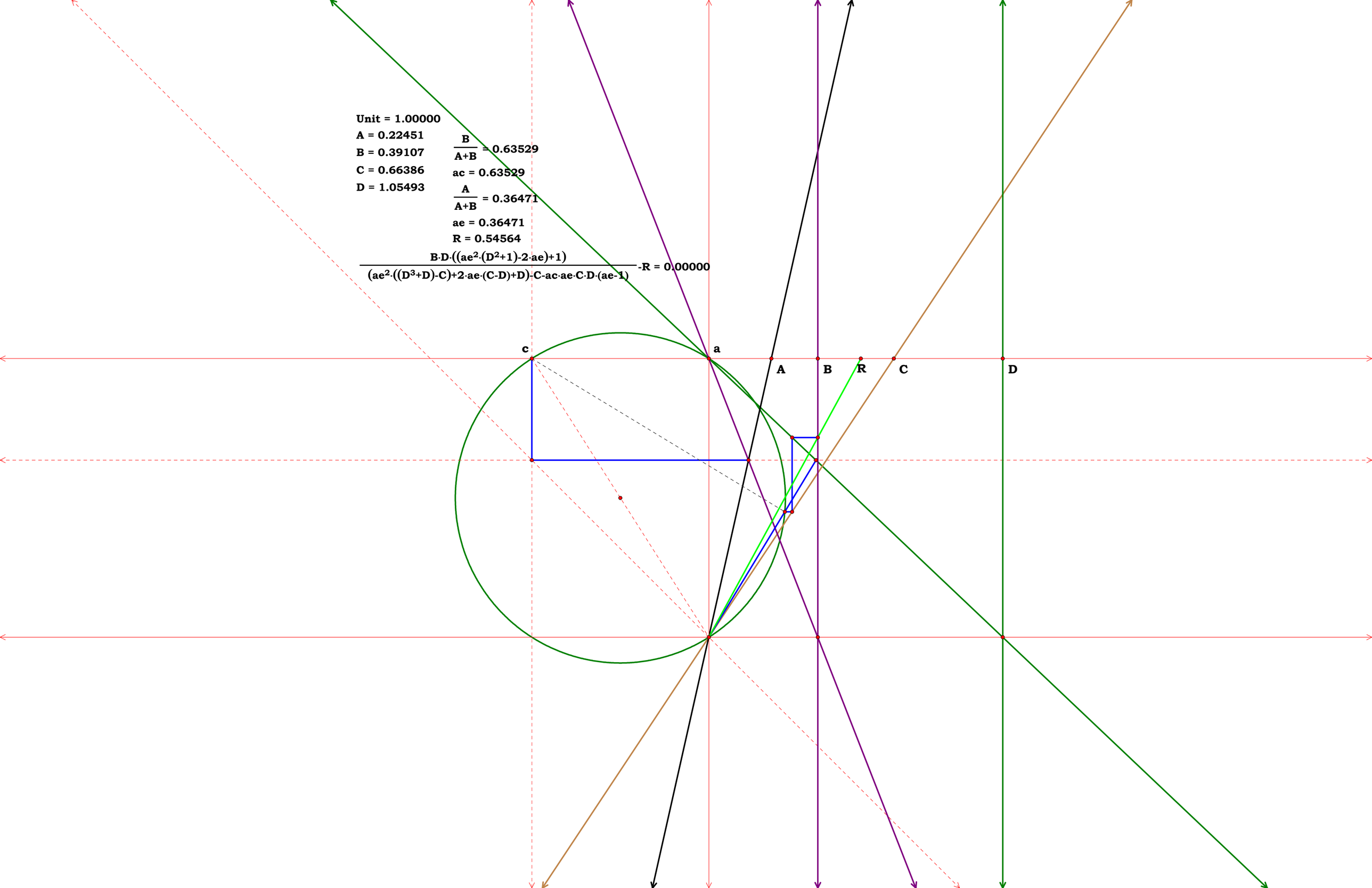
ac = 0.63529

$\frac{A}{A+B} = 0.36471$

ae = 0.36471

R = 0.54564

$$\frac{B \cdot D \cdot ((ae^2 \cdot (D^2+1)) - 2 \cdot ae) + 1)}{(ae^2 \cdot ((D^3+D) - C) + 2 \cdot ae \cdot (C-D) + D) - C - ac \cdot ae \cdot C \cdot D \cdot (ae-1)} - R = 0.00000$$



Unit = 1.00000
A = 0.19071
B = 0.42246
C = 1.01148
D = 0.77008

$\frac{A}{B} = 0.45143$

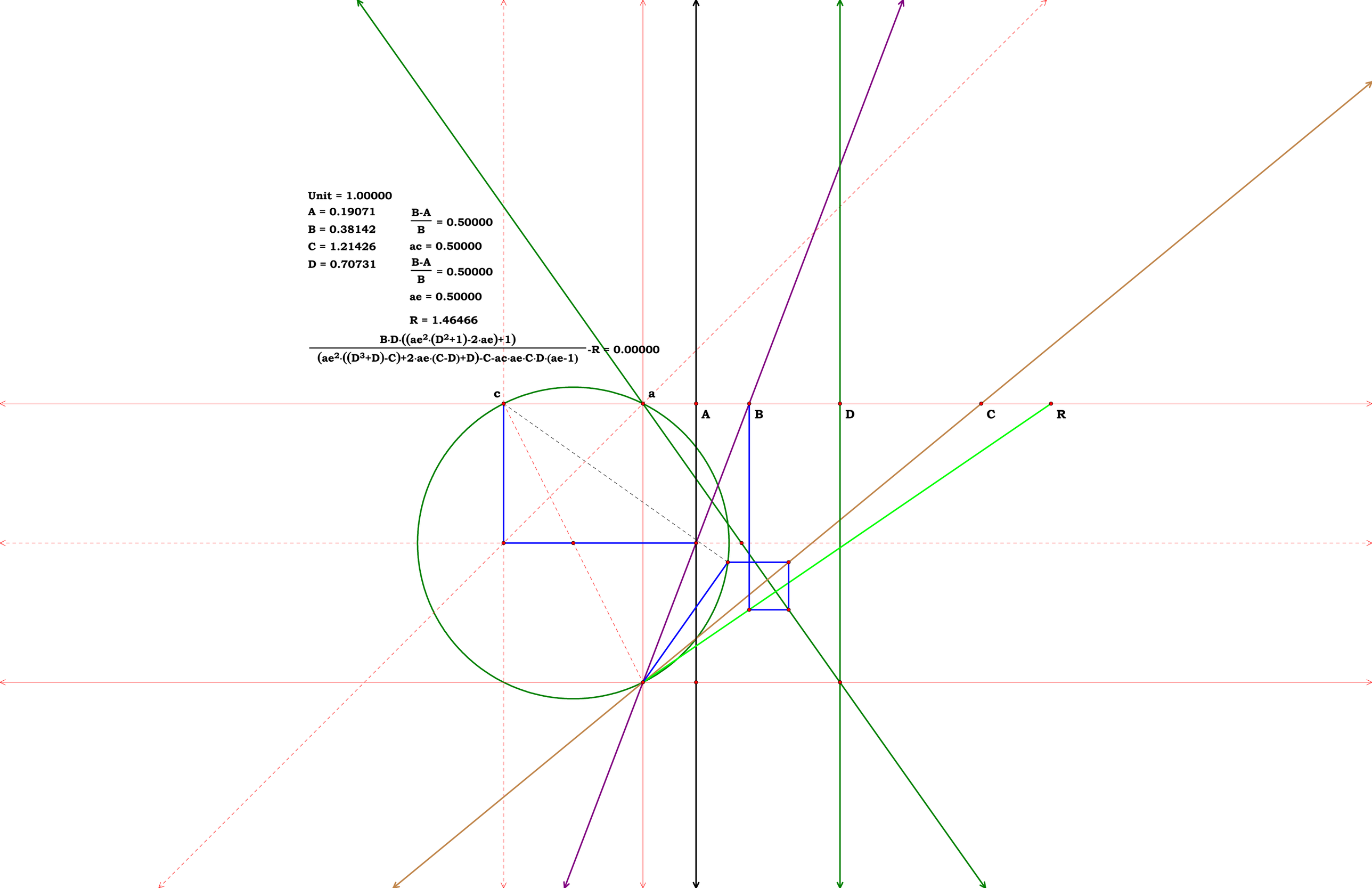
ac = 0.45143

$\frac{A}{B} = 0.45143$

ae = 0.45143
R = 1.27648

$$\frac{B\cdot D\cdot((ae^2\cdot(D^2+1)-2\cdot ae)+1)}{(ae^2\cdot((D^3+D)-C)+2\cdot ae\cdot(C-D)+D)-C-ac\cdot ae\cdot C\cdot D\cdot(ae-1)} - R = 0.00000$$

c
a
A
B
D
C
R


Unit = 1.00000
A = 0.19071
B = 0.38142
C = 1.21426
D = 0.70731
(B-A)/B = 0.50000
ac = 0.50000
(B-A)/B = 0.50000
ae = 0.50000
R = 1.46466
B·D·((ae²·(D²+1)-2·ae)+1) / (ae²·((D³+D)-C)+2·ae·(C-D)+D)-C-ac·ae·C·D·(ae-1) -R = 0.00000
c
a
A
B
D
C
R

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.10080

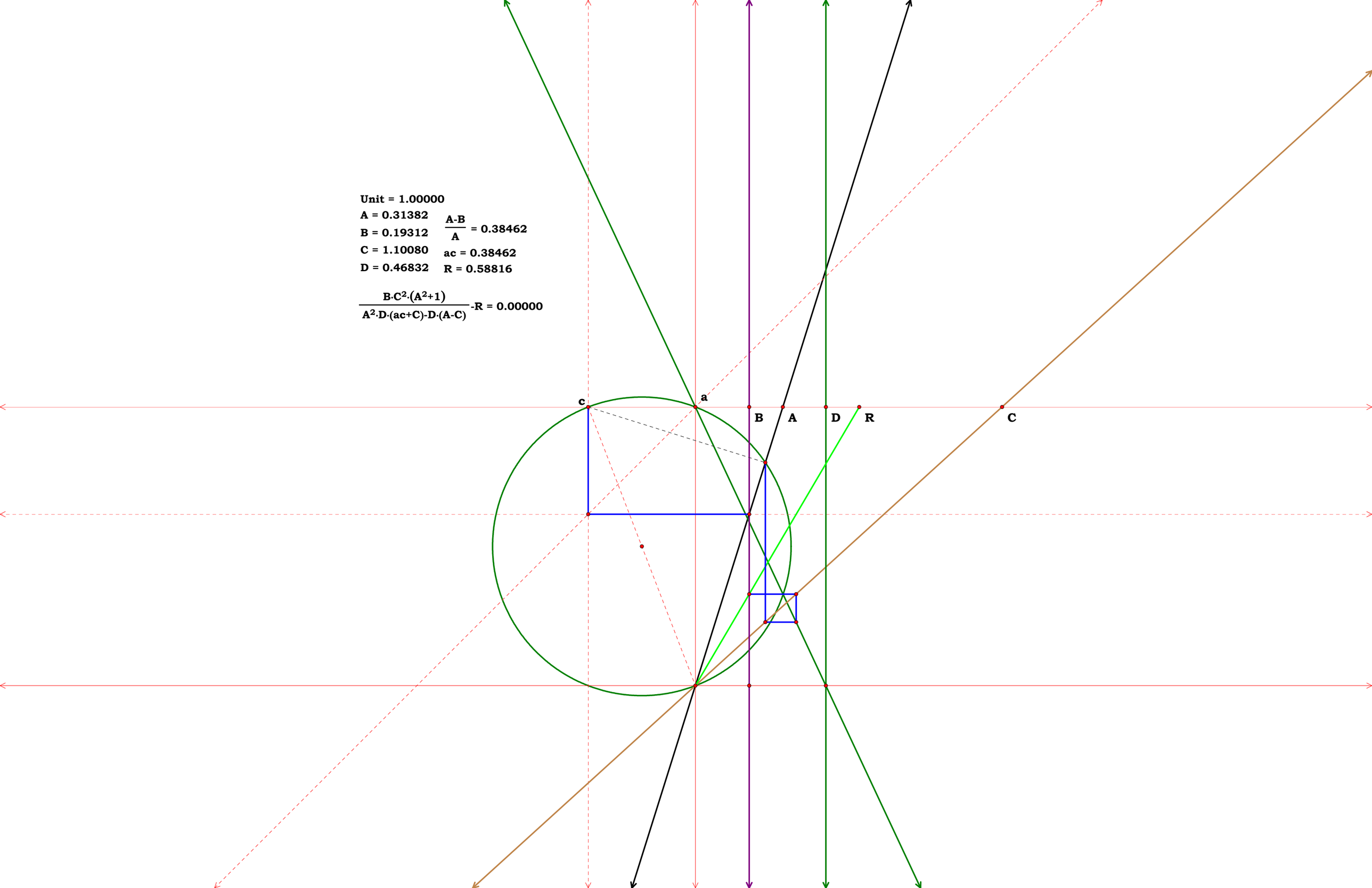
D = 0.46832

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.58816

$\frac{B \cdot C^2 \cdot (A^2+1)}{A^2 \cdot D \cdot (ac+C) - D \cdot (A-C)} - R = 0.00000$



Unit = 1.00000

A = 0.43211

B = 0.20278

C = 1.03804

D = 0.79663

$\frac{B}{A}$ = 0.46927

ac = 0.46927

R = 0.36680

$\frac{B \cdot C^2 \cdot (A^2+1)}{A^2 \cdot D \cdot (ac+C) - D \cdot (A-C)}$ - R = 0.00000

c

a

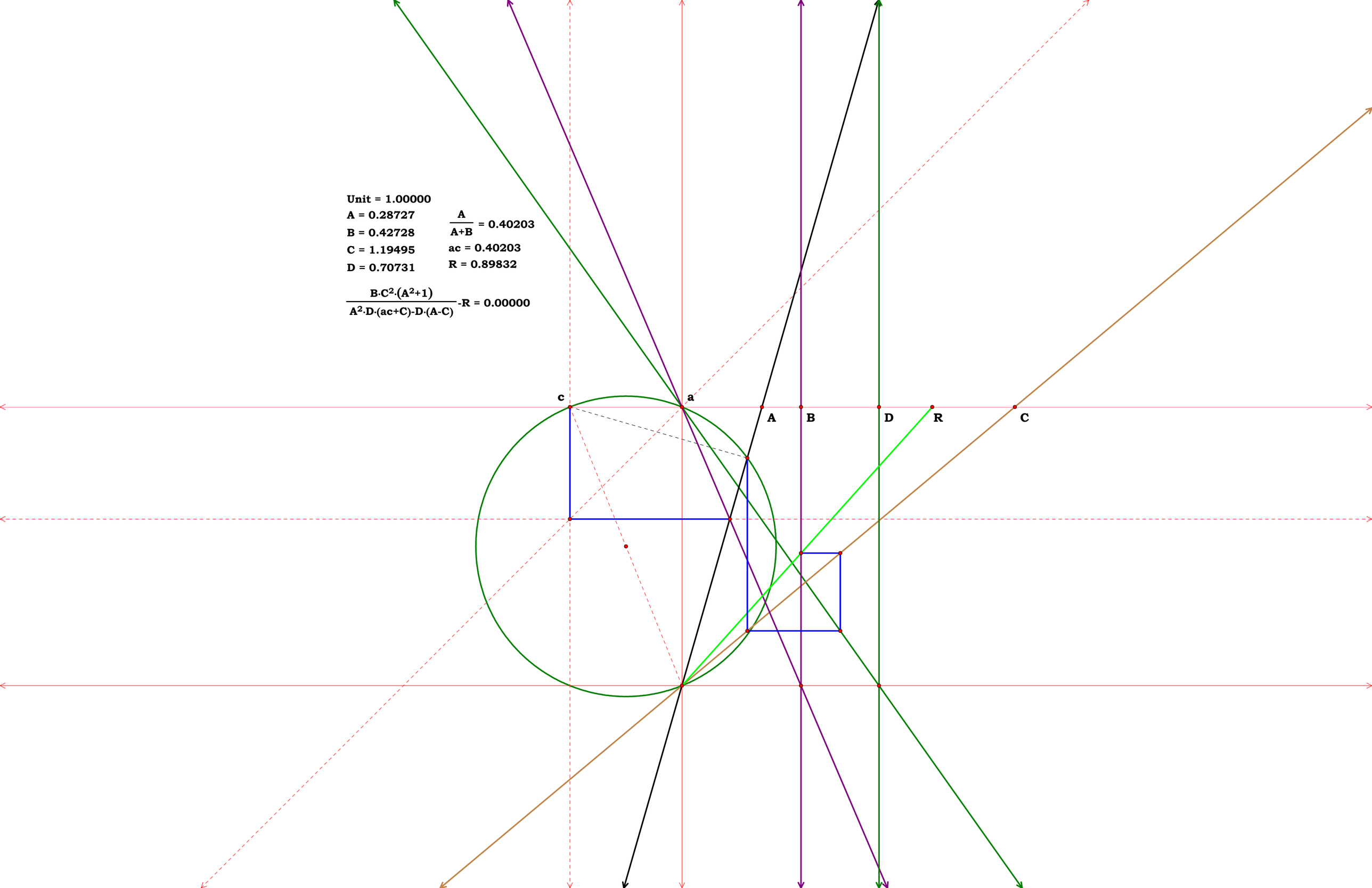
B

R

A

D

C


Unit = 1.00000
A = 0.28727
B = 0.42728
C = 1.19495
D = 0.70731
A/(A+B) = 0.40203
ac = 0.40203
R = 0.89832
B·C²·(A²+1) / (A²·D·(ac+C)-D·(A-C)) -R = 0.00000
c
a
A
B
D
R
C

Unit = 1.00000

A = 0.30900 $\frac{B}{A+B}$ = 0.58710

B = 0.43935 ac = 0.58710

C = 0.64938 R = 0.54745

D = 0.80870

$$\frac{B\cdot C^2\cdot(A^2+1)}{A^2\cdot D\cdot(ac+C)-D\cdot(A-C)}-R = 0.00000$$

c a A B R C D

Unit = 1.00000

A = 0.24382

B = 0.52143

C = 1.00665

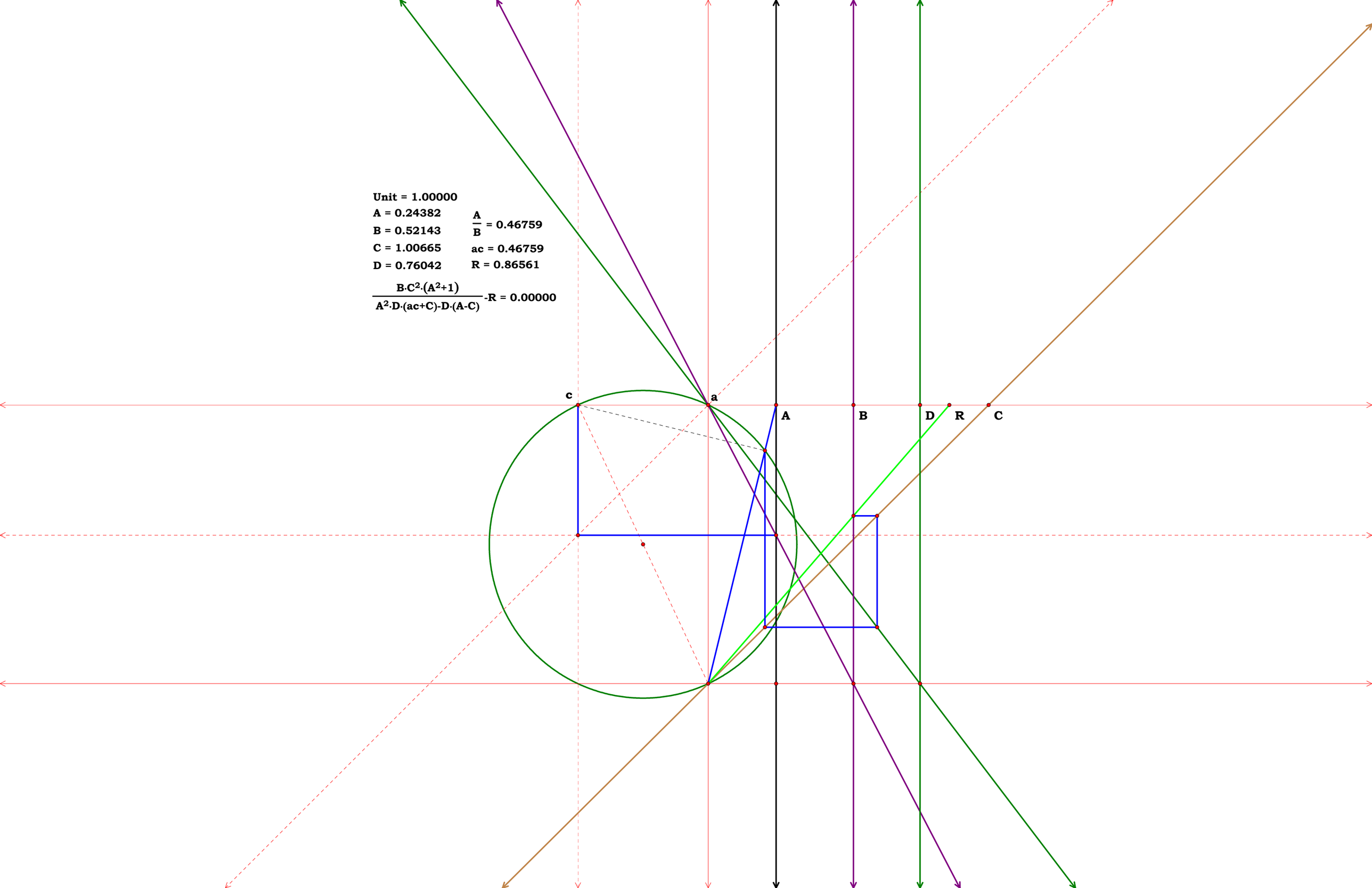
D = 0.76042

$\frac{A}{B}$ = 0.46759

ac = 0.46759

R = 0.86561

$\frac{B \cdot C^2 \cdot (A^2+1)}{A^2 \cdot D \cdot (ac+C) - D \cdot (A-C)}$ - R = 0.00000



Unit = 1.00000

A = 0.26313

B = 0.39107

C = 0.61799

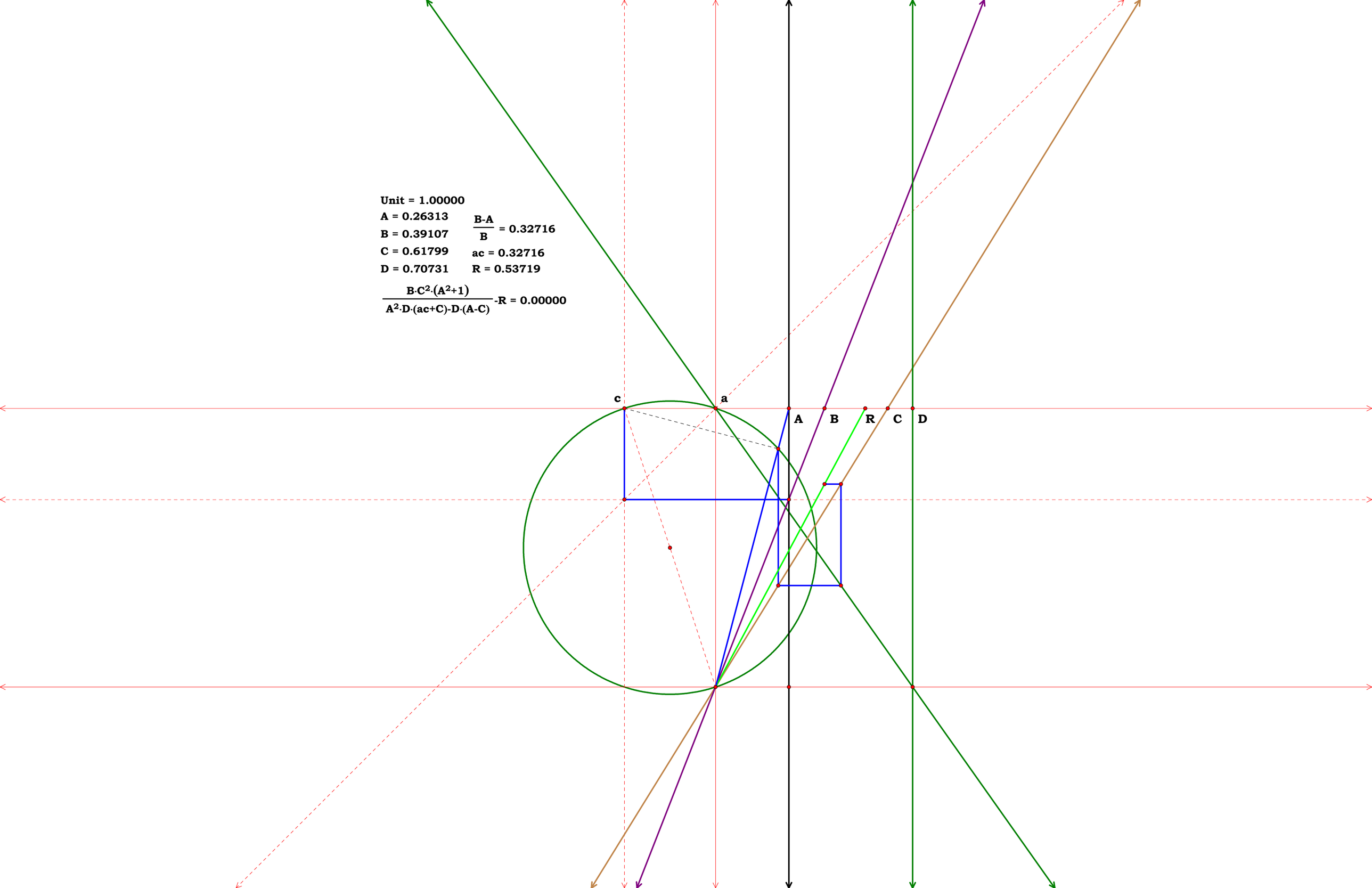
D = 0.70731

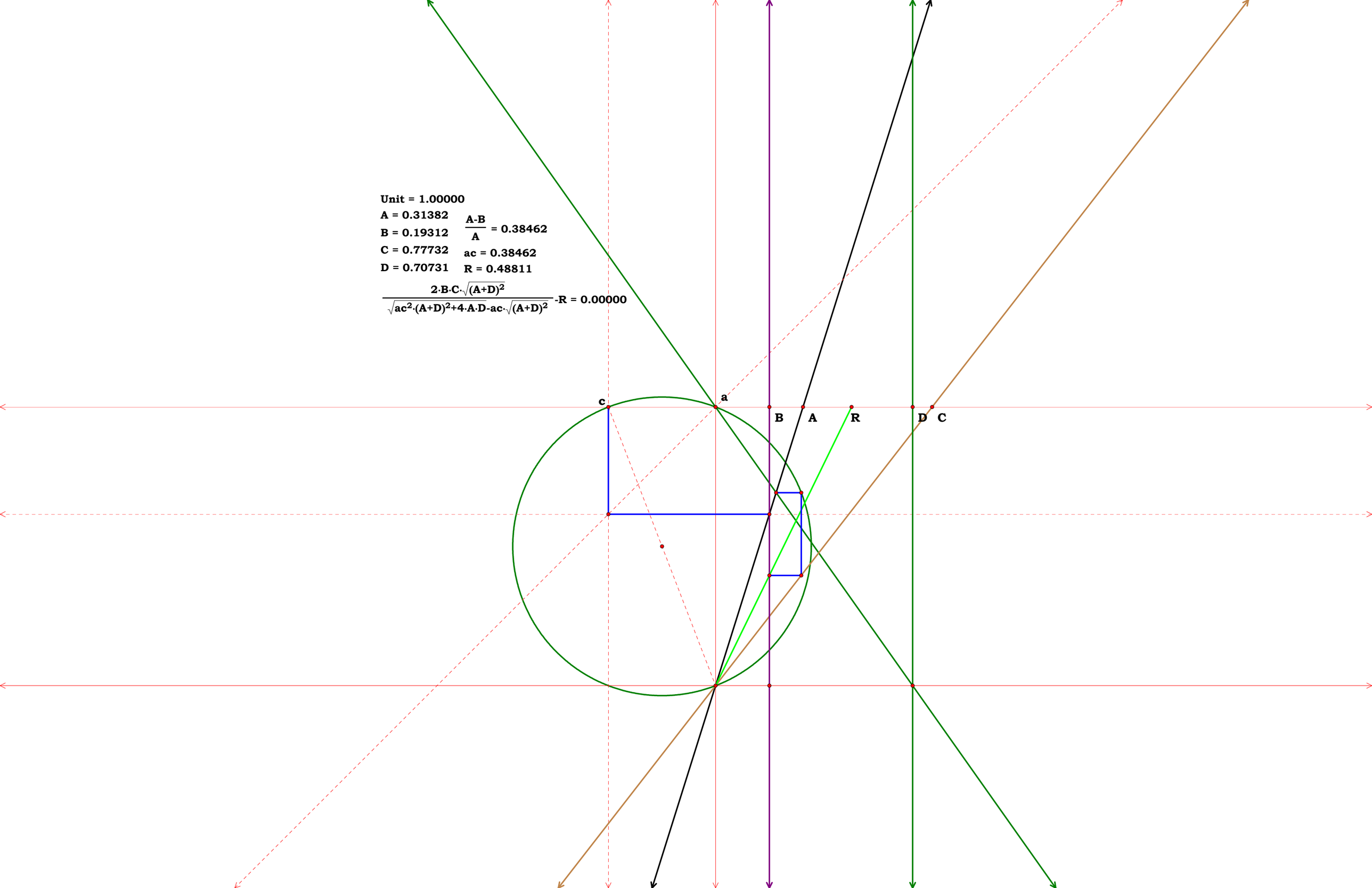
$\frac{B-A}{B} = 0.32716$

ac = 0.32716

R = 0.53719

$\frac{B \cdot C^2 \cdot (A^2+1)}{A^2 \cdot D \cdot (ac+C) - D \cdot (A-C)} - R = 0.00000$




Unit = 1.00000
A = 0.31382
B = 0.19312
C = 0.77732
D = 0.70731
$\frac{A-B}{A}$ = 0.38462
ac = 0.38462
R = 0.48811
$\frac{2\cdot B\cdot C\cdot\sqrt{(A+D)^2}}{\sqrt{ac^2\cdot(A+D)^2+4\cdot A\cdot D}-ac\cdot\sqrt{(A+D)^2}}$-R = 0.00000
c
a
B
A
R
D
C

Unit = 1.00000

A = 0.44418

B = 0.29210

C = 0.61317

D = 1.36393

$\frac{B}{A} = 0.65761$

ac = 0.65761

R = 0.84133

$\frac{2 \cdot B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{ac^2 \cdot (A+D)^2 + 4 \cdot A \cdot D} - ac \cdot \sqrt{(A+D)^2}} - R = 0.00000$

c

a

B

A

C

R

D

Unit = 1.00000
A = 0.19071
B = 0.43211
C = 0.61317
D = 0.70731

$\frac{A}{A+B} = 0.30620$

ac = 0.30620
R = 0.93427

$\frac{2 \cdot B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{ac^2 \cdot (A+D)^2 + 4 \cdot A \cdot D} - ac \cdot \sqrt{(A+D)^2}} - R = 0.00000$

c
a
A
B
C
D
R

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.55764

D = 0.70731

$\frac{B}{A+B} = 0.63529$

ac = 0.63529

R = 1.01401

$\frac{2 \cdot B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{ac^2 \cdot (A+D)^2 + 4 \cdot A \cdot D} - ac \cdot \sqrt{(A+D)^2}} - R = 0.00000$

c

a

A

B

C

D

R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.71938

D = 0.70731

$\frac{A}{B}$ = 0.48765

ac = 0.48765

R = 1.21096

$\frac{2 \cdot B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{ac^2 \cdot (A+D)^2 + 4 \cdot A \cdot D} - ac \cdot \sqrt{(A+D)^2}}$ - R = 0.00000

c

a

A

B

C

D

R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.75801

D = 0.70731

$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 1.30926

$\frac{2 \cdot B \cdot C \cdot \sqrt{(A+D)^2}}{\sqrt{ac^2 \cdot (A+D)^2 + 4 \cdot A \cdot D} - ac \cdot \sqrt{(A+D)^2}} - R = 0.00000$

c

a

A

B

D C

R

Unit = 1.00000
A = 1.07425
B = 0.81353
C = 1.70190
D = 0.37659

$\frac{A-B}{A} = 0.24270$

ac = 0.24270
R = 0.34220

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left(\left(4\cdot D^2+4\cdot ac\cdot D\right)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)} - R = 0.00000$$

R D B A C

Unit = 1.00000
A = 1.07425
B = 0.55764
C = 2.16298
D = 0.37900

$\frac{B}{A}$ = 0.51910
ac = 0.51910
R = 0.51523

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left((4\cdot D^2+4\cdot ac\cdot D)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)}-R = 0.00000$$

D R B A C

Unit = 1.00000
A = 1.07425
B = 0.81353
C = 1.88778
D = 0.37659

$\frac{A}{A+B} = 0.56905$

ac = 0.56905

R = 0.51880

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left(\left(4\cdot D^2+4\cdot ac\cdot D\right)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)} - R = 0.00000$$

D R B A C

Unit = 1.00000

A = 1.07425

B = 0.81353

C = 0.91009

D = 0.37659

$\frac{B}{A+B} = 0.43095$

ac = 0.43095

R = 0.28294

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left((4\cdot D^2+4\cdot ac\cdot D)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)}-R = 0.00000$$

R D B C A

Unit = 1.00000
A = 1.07425
B = 1.83225
C = 1.70190
D = 0.37659

$\frac{A}{B}$ = 0.58630

ac = 0.58630

R = 0.48418

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left((4\cdot D^2+4\cdot ac\cdot D)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)}-R = 0.00000$$

D R A C B

Unit = 1.00000
A = 1.07425
B = 1.26978
C = 1.70190
D = 0.62282

$\frac{B-A}{B}$ = 0.15399

ac = 0.15399

R = 0.41796

$$\frac{(2\cdot C\cdot D\cdot(A-D))\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}+\sqrt{A^2\cdot D^2-C^2\cdot(A-D)^2\cdot\left(\left(4\cdot D^2+4\cdot ac\cdot D\right)-1\right)-2\cdot A\cdot C\cdot D\cdot(2\cdot ac\cdot D-1)\cdot(A-D)}\right)}$$ -R = 0.00000

R D A B C

Unit = 1.00000
A = 1.41462
B = 0.39107
C = 2.38748
D = 0.70731

$\frac{A-B}{A} = 0.72355$

ac = 0.72355

R = 0.24197

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

R B D A C

Unit = 1.00000

A = 1.05252

B = 0.39107

C = 1.69465

D = 0.70731

$\frac{B}{A}$ = 0.37156

ac = 0.37156

R = 0.34424

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

R B D A C

Unit = 1.00000
A = 1.05252
B = 0.39107
C = 1.69465
D = 0.70731

$\frac{A}{A+B} = 0.72910$

ac = 0.72910
R = 0.25132

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

R B D A C

Unit = 1.00000

A = 1.05252

B = 0.43453

C = 1.69465

D = 0.70731

$$\frac{B}{A+B} = 0.29221$$

ac = 0.29221

R = 0.37134

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

R B D A C

Unit = 1.00000
A = 1.05252
B = 1.95054
C = 1.69465
D = 0.70731

$\frac{A}{B}$ = 0.53960
ac = 0.53960
R = 0.29517

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

R
D
A
C
B

Unit = 1.00000
A = 1.05252
B = 0.53350
C = 1.69465
D = 0.70731

$\frac{B-A}{B} = -0.97285$

ac = -0.97285
R = 1.18142

$$\frac{\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}{2\cdot\sqrt{C^2\cdot(A-D)^2+2\cdot A\cdot C\cdot D\cdot(A-D)+A^2\cdot D^2}}-R = 0.00000$$

B D A R C

Unit = 1.00000
A = 1.11046
B = 0.39107
C = 1.48222
D = 0.70731

$\frac{A-B}{A} = 0.64783$

ac = 0.64783
R = 0.47181

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}}-R = 0.00000$$

B R D A C

Unit = 1.00000

A = 1.11046

B = 0.39107

C = 1.48222

D = 0.70731

$\frac{B}{A}$ = 0.35217

ac = 0.35217

R = 0.61564

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}}-R = 0.00000$$

B R D A C

Unit = 1.00000
A = 1.11046
B = 0.39107
C = 1.48222
D = 0.70731

$\frac{A}{A+B} = 0.73955$

ac = 0.73955
R = 0.43735

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}} - R = 0.00000$$

B R D A C

Unit = 1.00000
A = 1.11046
B = 0.28968
C = 1.48222
D = 0.63972

$\frac{B}{A+B} = 0.20690$

ac = 0.20690
R = 0.80700

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}} - R = 0.00000$$

B
D
R
A
C

Unit = 1.00000
A = 1.11046
B = 1.79846
C = 1.48222
D = 0.70731

$\frac{A}{B}$ = 0.61745
ac = 0.61745
R = 0.48416

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}}-R = 0.00000$$

R
D
A
C
B

Unit = 1.00000

A = 1.11046

B = 1.75983

C = 1.48222

D = 0.70731

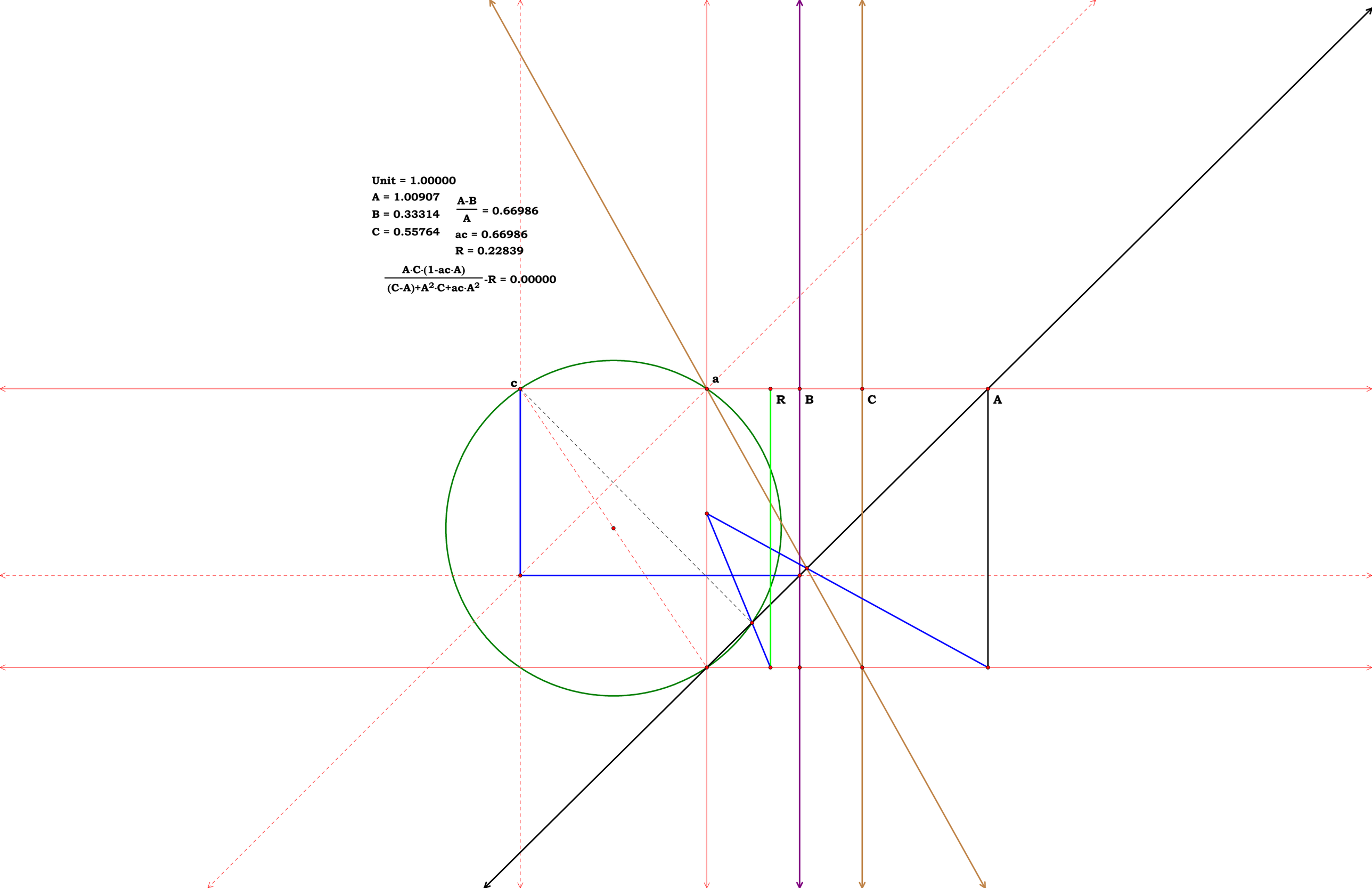
$\frac{B-A}{B} = 0.36900$

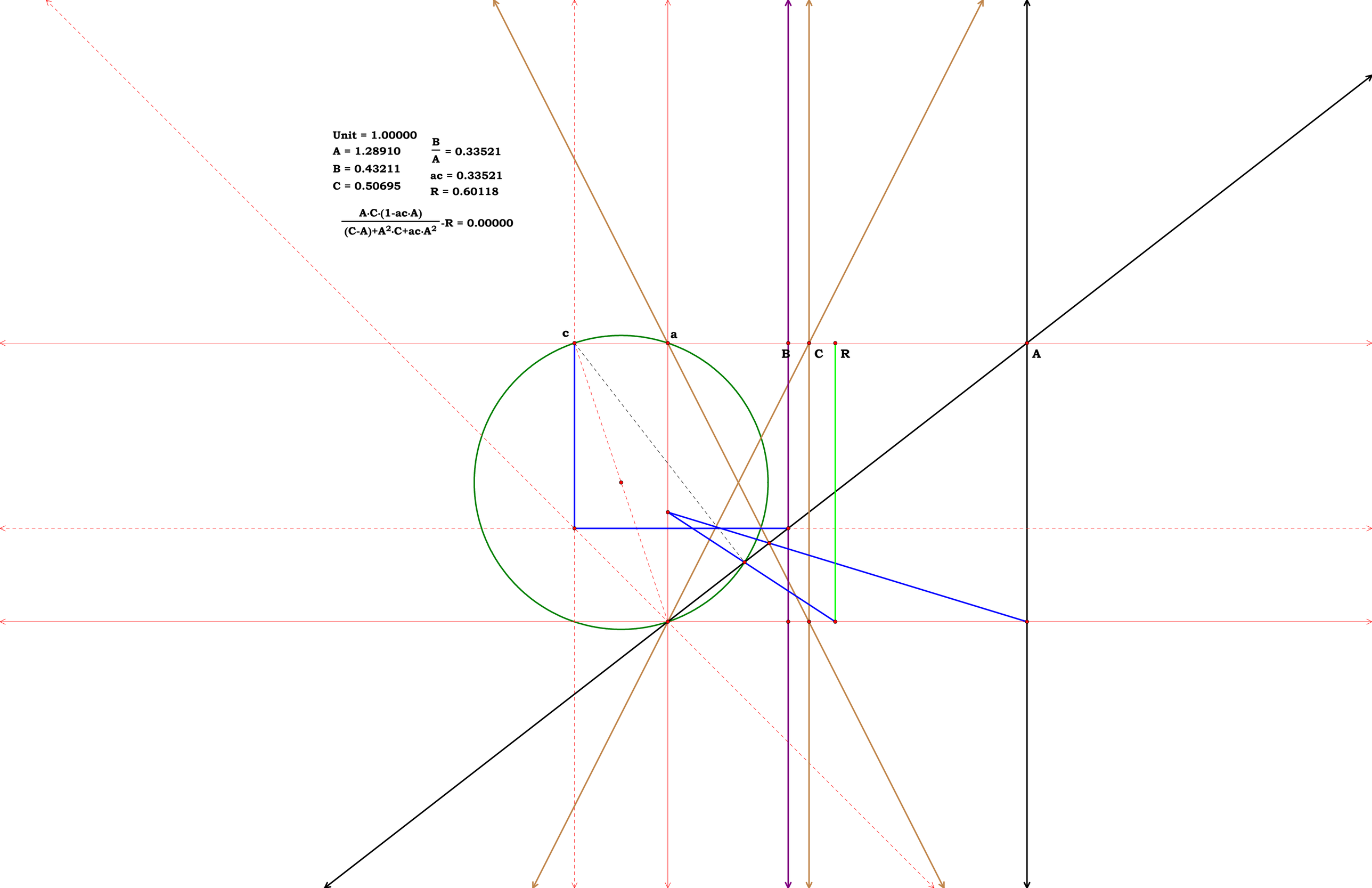
ac = 0.36900

R = 0.60590

$$\frac{(A\cdot(C+D)-C\cdot D)\cdot\left(\sqrt{ac^2\cdot(A\cdot(C+D)-C\cdot D)^2+4\cdot A\cdot C\cdot D\cdot(A-D)}-ac\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}\right)}{2\cdot A\cdot D\cdot\sqrt{(A\cdot(C+D)-C\cdot D)^2}}-R = 0.00000$$

R D A C B


Unit = 1.00000
A = 1.00907
B = 0.33314
C = 0.55764
(A-B)/A = 0.66986
ac = 0.66986
R = 0.22839
A·C·(1-ac·A)/((C-A)+A²·C+ac·A²)-R = 0.00000
c
a
R
B
C
A


Unit = 1.00000
A = 1.28910
B = 0.43211
C = 0.50695
B/A = 0.33521
ac = 0.33521
R = 0.60118
A·C·(1-ac·A)/(C-A)+A²·C+ac·A² -R = 0.00000
c
a
B
C
R
A

Unit = 1.00000

A = 0.85457

B = 1.50877

C = 0.46349

$\frac{A}{A+B}$ = 0.36159

ac = 0.36159

R = 1.29420

$\frac{A \cdot C \cdot (1-ac \cdot A)}{(C-A)+A^2 \cdot C+ac \cdot A^2}$ -R = 0.00000

c

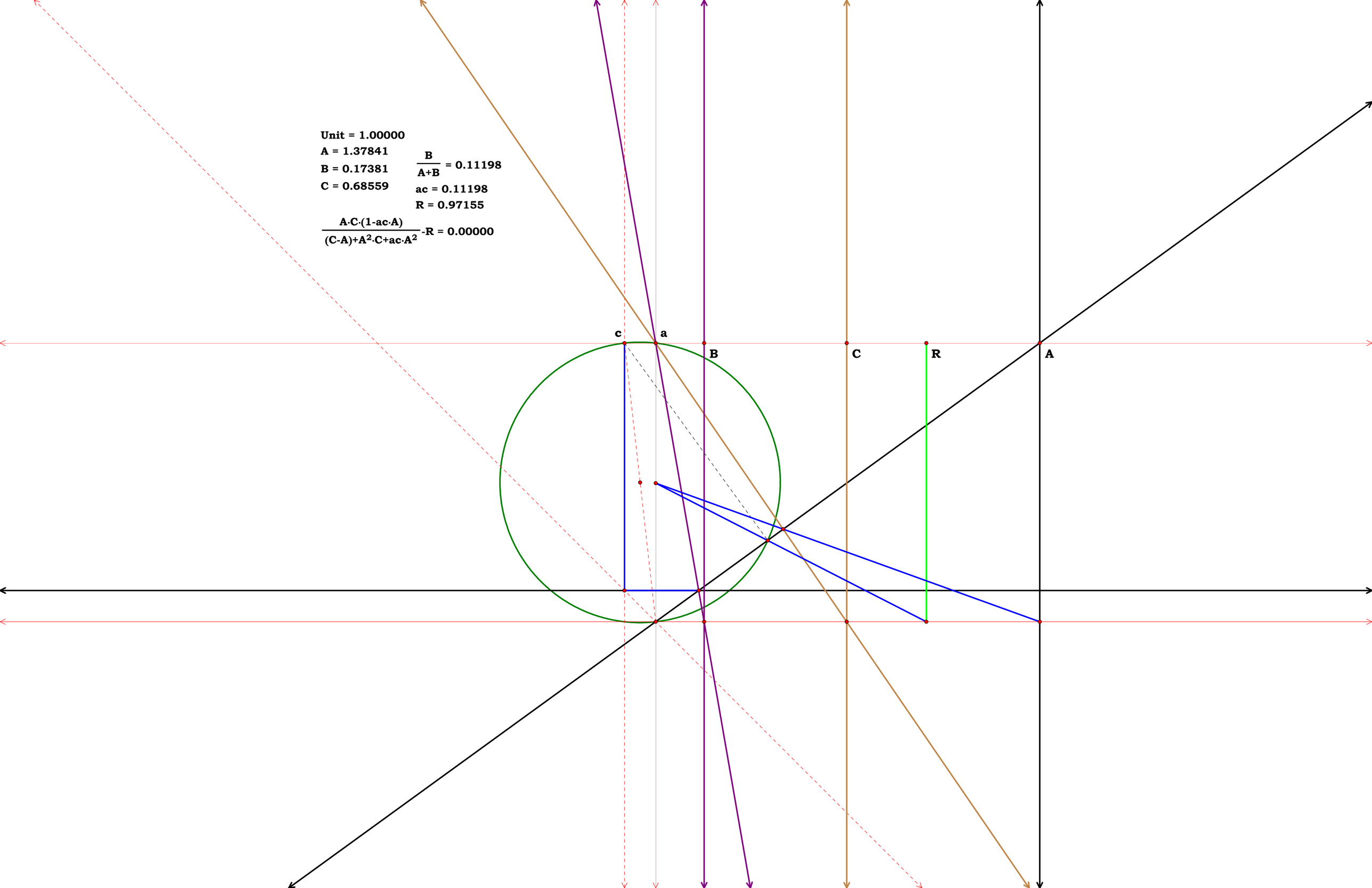
a

C

A

R

B


Unit = 1.00000
A = 1.37841
B = 0.17381
C = 0.68559
B / (A+B) = 0.11198
ac = 0.11198
R = 0.97155
A·C·(1-ac·A) / ((C-A)+A²·C+ac·A²) -R = 0.00000
c
a
B
C
R
A

Unit = 1.00000

A = 0.99700

B = 2.04227

C = 0.44901

$\frac{A}{B}$ = 0.48818

ac = 0.48818

R = 0.59903

$\frac{A \cdot C \cdot (1-ac \cdot A)}{(C-A)+A^2 \cdot C+ac \cdot A^2}$ - R = 0.00000

c

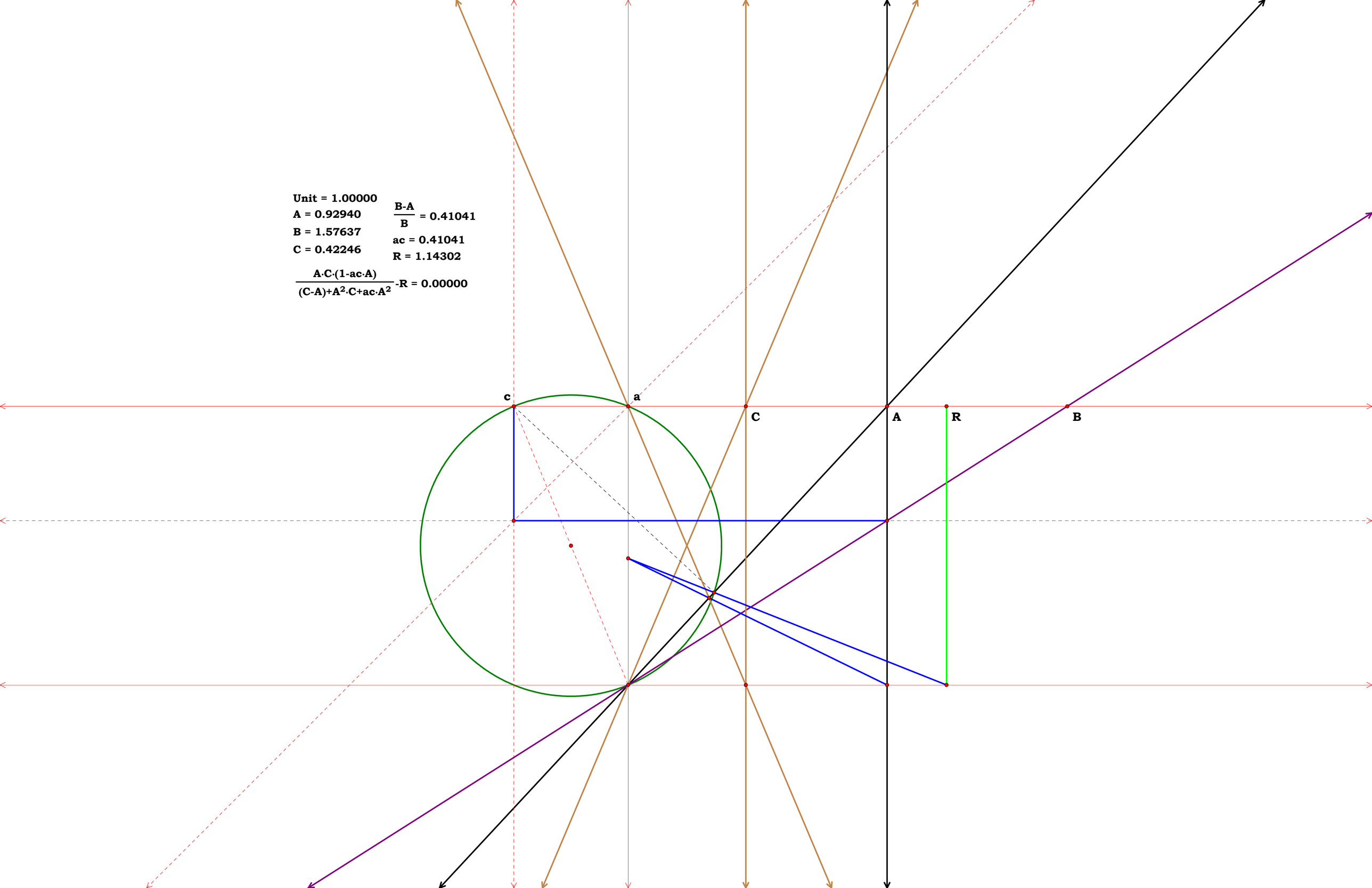
a

C

R

A

B


Unit = 1.00000
A = 0.92940
B = 1.57637
C = 0.42246
(B-A)/B = 0.41041
ac = 0.41041
R = 1.14302
A·C·(1-ac·A)/((C-A)+A²·C+ac·A²)-R = 0.00000
c
a
C
A
R
B

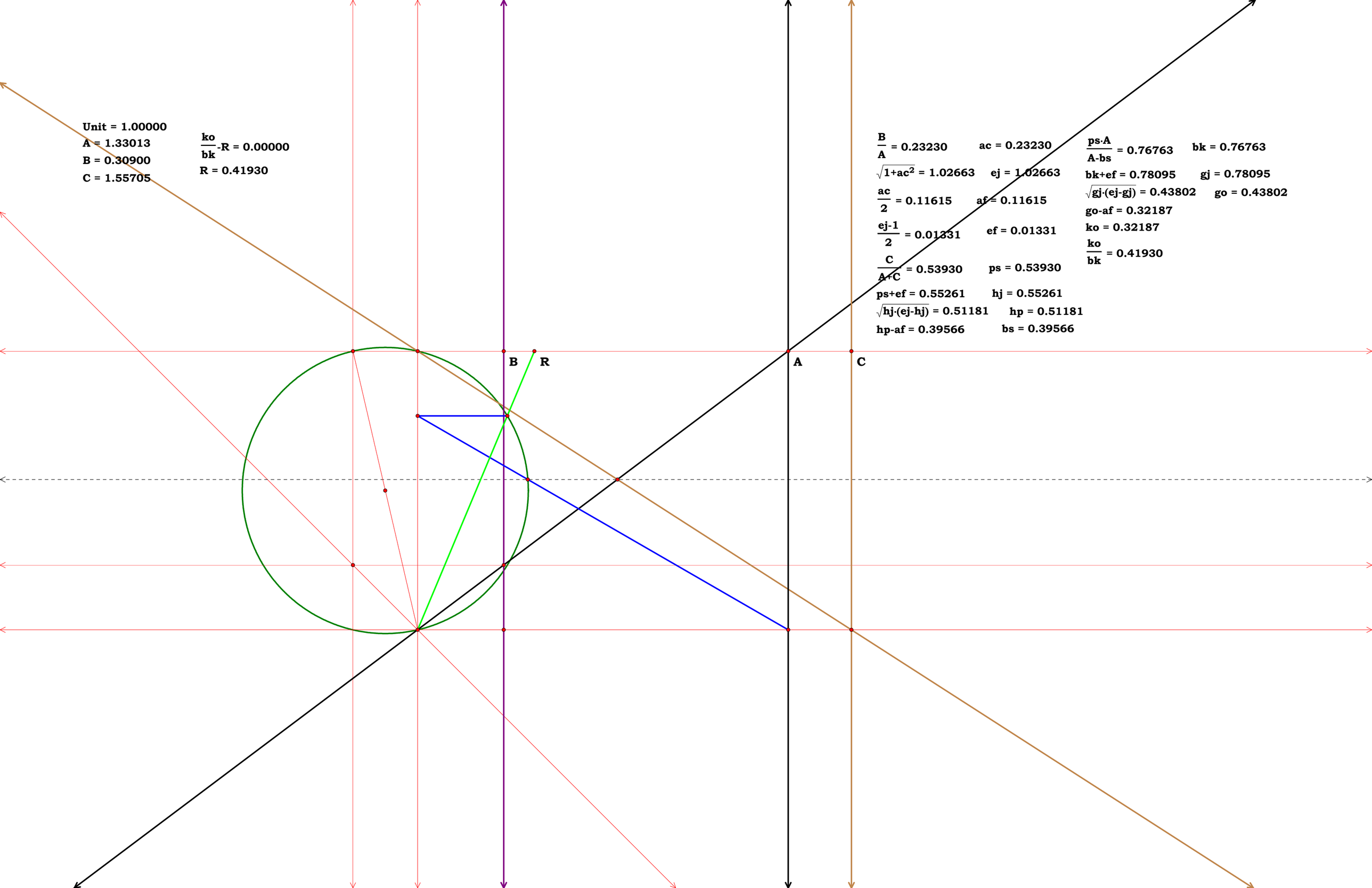
Unit = 1.00000
A = 1.03562
B = 0.39107
C = 1.55705

$\frac{ko}{bk}$-R = 0.00000
R = 0.23255

$\frac{A-B}{A}$ = 0.62238 ac = 0.62238
$\sqrt{1+ac^2}$ = 1.17786 ej = 1.17786
$\frac{ac}{2}$ = 0.31119 af = 0.31119
$\frac{ej-1}{2}$ = 0.08893 ef = 0.08893
$\frac{C}{A+C}$ = 0.60056 ps = 0.60056
ps+ef = 0.68949 hj = 0.68949
$\sqrt{hj\cdot(ej-hj)}$ = 0.58028 hp = 0.58028
hp-af = 0.26909 bs = 0.26909

$\frac{ps\cdot A}{A-bs}$ = 0.81139 bk = 0.81139
bk+ef = 0.90032 gj = 0.90032
$\sqrt{gj\cdot(ej-gj)}$ = 0.49988 go = 0.49988
go-af = 0.18869
ko = 0.18869
$\frac{ko}{bk}$ = 0.23255

R
B
A
C


Unit = 1.00000
A = 1.33013
B = 0.30900
C = 1.55705
ko/bk-R = 0.00000
R = 0.41930
B/A = 0.23230
ac = 0.23230
√(1+ac²) = 1.02663
ej = 1.02663
ac/2 = 0.11615
af = 0.11615
(ej-1)/2 = 0.01331
ef = 0.01331
C/(A+C) = 0.53930
ps = 0.53930
ps+ef = 0.55261
hj = 0.55261
√(hj·(ej-hj)) = 0.51181
hp = 0.51181
hp-af = 0.39566
bs = 0.39566
ps·A/(A-bs) = 0.76763
bk = 0.76763
bk+ef = 0.78095
gj = 0.78095
√(gj·(ej-gj)) = 0.43802
go = 0.43802
go-af = 0.32187
ko = 0.32187
ko/bk = 0.41930
B
R
A
C

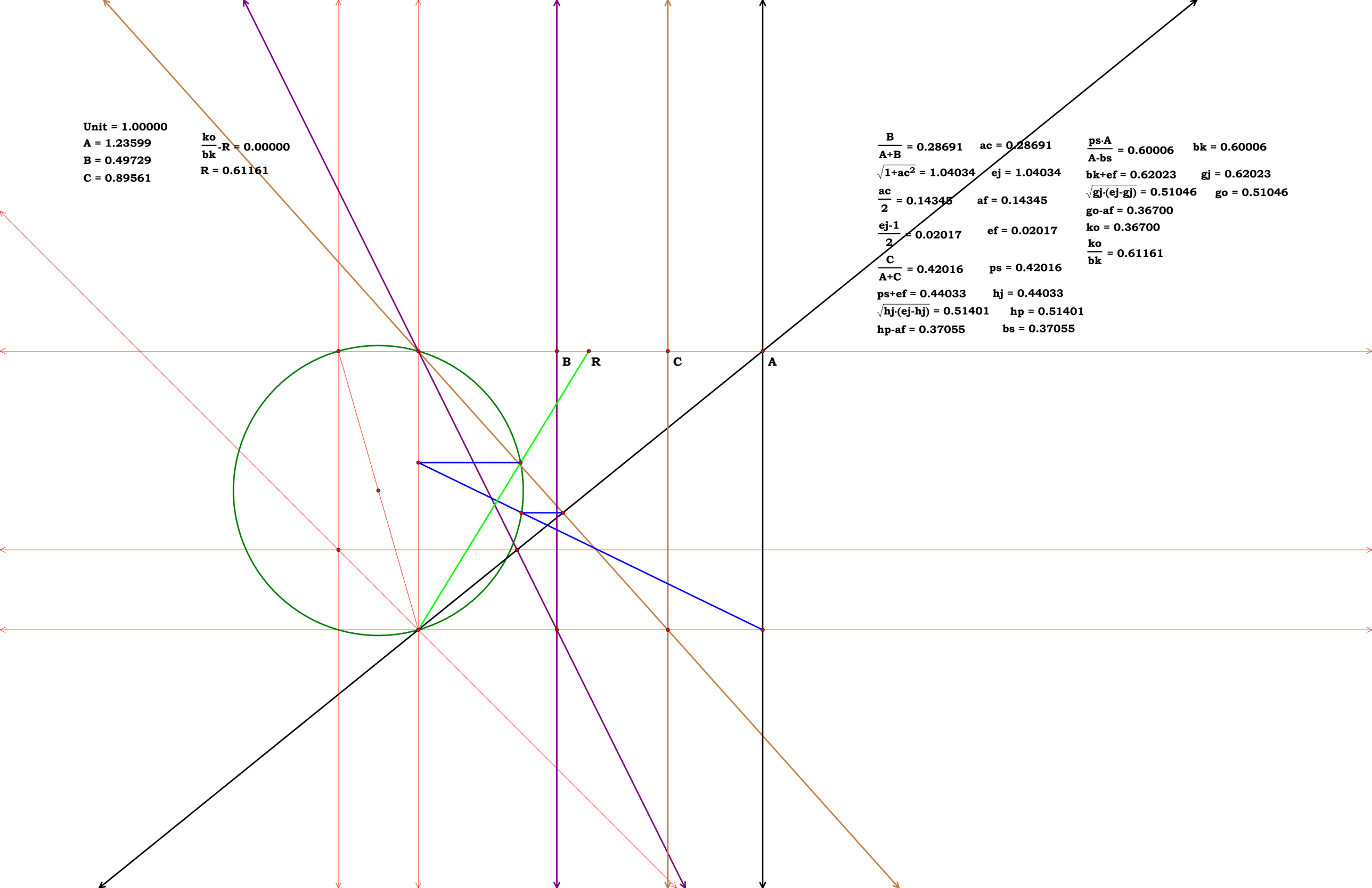
Unit = 1.00000
A = 1.03562
B = 0.37418
C = 0.73869

$\frac{ko}{bk}$-R = 0.00000
R = 0.45944

$\frac{A}{A+B}$ = 0.73459 ac = 0.73459
$\sqrt{1+ac^2}$ = 1.24081 ej = 1.24081
$\frac{ac}{2}$ = 0.36729 af = 0.36729
$\frac{ej-1}{2}$ = 0.12041 ef = 0.12041
$\frac{C}{A+C}$ = 0.41633 ps = 0.41633
ps+ef = 0.53673 hj = 0.53673
$\sqrt{hj\cdot(ej-hj)}$ = 0.61474 hp = 0.61474
hp-af = 0.24744 bs = 0.24744

$\frac{ps\cdot A}{A-bs}$ = 0.54703 bk = 0.54703
bk+ef = 0.66744 gj = 0.66744
$\sqrt{gj\cdot(ej-gj)}$ = 0.61862 go = 0.61862
go-af = 0.25133
ko = 0.25133
$\frac{ko}{bk}$ = 0.45944

B
R
C
A


Unit = 1.00000
A = 1.23599
B = 0.49729
C = 0.89561
ko/bk-R = 0.00000
R = 0.61161
B/(A+B) = 0.28691 ac = 0.28691
√(1+ac²) = 1.04034 ej = 1.04034
ac/2 = 0.14345 af = 0.14345
(ej-1)/2 = 0.02017 ef = 0.02017
C/(A+C) = 0.42016 ps = 0.42016
ps+ef = 0.44033 hj = 0.44033
√(hj·(ej-hj)) = 0.51401 hp = 0.51401
hp-af = 0.37055 bs = 0.37055
ps·A/(A-bs) = 0.60006 bk = 0.60006
bk+ef = 0.62023 gj = 0.62023
√(gj·(ej-gj)) = 0.51046 go = 0.51046
go-af = 0.36700
ko = 0.36700
ko/bk = 0.61161
B
R
C
A

Unit = 1.00000
A = 1.36393
B = 1.83708
C = 1.55705

$\frac{ko}{bk}$-R = 0.00000
R = 0.35588

$\frac{A}{B}$ = 0.74244 ac = 0.74244

$\sqrt{1+ac^2}$ = 1.24548 ej = 1.24548

$\frac{ac}{2}$ = 0.37122 af = 0.37122

$\frac{ej-1}{2}$ = 0.12274 ef = 0.12274

$\frac{C}{A+C}$ = 0.53306 ps = 0.53306

ps+ef = 0.65580 hj = 0.65580

$\sqrt{hj\cdot(ej-hj)}$ = 0.62186 hp = 0.62186

hp-af = 0.25064 bs = 0.25064

$\frac{ps\cdot A}{A-bs}$ = 0.65307 bk = 0.65307

bk+ef = 0.77581 gj = 0.77581

$\sqrt{gj\cdot(ej-gj)}$ = 0.60364 go = 0.60364

go-af = 0.23241

ko = 0.23241

$\frac{ko}{bk}$ = 0.35588

R

A

C

B

Unit = 1.00000
A = 1.11770 $\frac{ko}{bk}$-R = 0.00000
B = 1.45325
C = 0.83767 R = 0.56325

$\frac{B-A}{B}$ = 0.23090 ac = 0.23090
$\sqrt{1+ac^2}$ = 1.02631 ej = 1.02631
$\frac{ac}{2}$ = 0.11545 af = 0.11545
$\frac{ej-1}{2}$ = 0.01316 ef = 0.01316
$\frac{C}{A+C}$ = 0.42840 ps = 0.42840
ps+ef = 0.44155 hj = 0.44155
$\sqrt{hj\cdot(ej-hj)}$ = 0.50813 hp = 0.50813
hp-af = 0.39269 bs = 0.39269

$\frac{ps\cdot A}{A-bs}$ = 0.66043 bk = 0.66043
bk+ef = 0.67358 gj = 0.67358
$\sqrt{gj\cdot(ej-gj)}$ = 0.48743 go = 0.48743
go-af = 0.37199
ko = 0.37199
$\frac{ko}{bk}$ = 0.56325

R C A B

Unit = 1.00000

A = 0.88837

B = 0.39107

$\frac{A-B}{A}$ = 0.55978

ac = 0.55978

$$\frac{(A\cdot(ac+A))\cdot\left(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{\left(\left(\left(A^2\cdot ac^4+ac^2\cdot A^2\cdot\left(\left(A^2+2\cdot ac\cdot A\right)-8\right)\right)-4\cdot ac\cdot A\cdot\left(A^2-3\right)\right)+4\cdot A^2\right)-4}\right)}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}}-R = 0.00000$$

R = 0.72322

B

R

A

Unit = 1.00000

A = 0.88837

B = 0.39107

$\frac{B}{A}$ = 0.44022

ac = 0.44022

$$\frac{(A\cdot(ac+A))\cdot\left(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{\left(\left(\left(A^2\cdot ac^4+ac^2\cdot A^2\cdot\left(\left(A^2+2\cdot ac\cdot A\right)-8\right)\right)-4\cdot ac\cdot A\cdot\left(A^2-3\right)\right)+4\cdot A^2\right)-4}\right)}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}}-R = 0.00000$$

R = 0.63181

B

R

A

Unit = 1.00000

A = 0.88837

B = 0.39107

$$\frac{A}{A+B} = 0.69434$$

ac = 0.69434

$$\frac{(A\cdot(ac+A))\cdot(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{(((A^2\cdot ac^4+ac^2\cdot A^2\cdot((A^2+2\cdot ac\cdot A)-8))-4\cdot ac\cdot A\cdot(A^2-3))+4\cdot A^2)-4)}}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}} - R = 0.00000$$

R = 0.79787

B

R

A

Unit = 1.00000

A = 0.88837

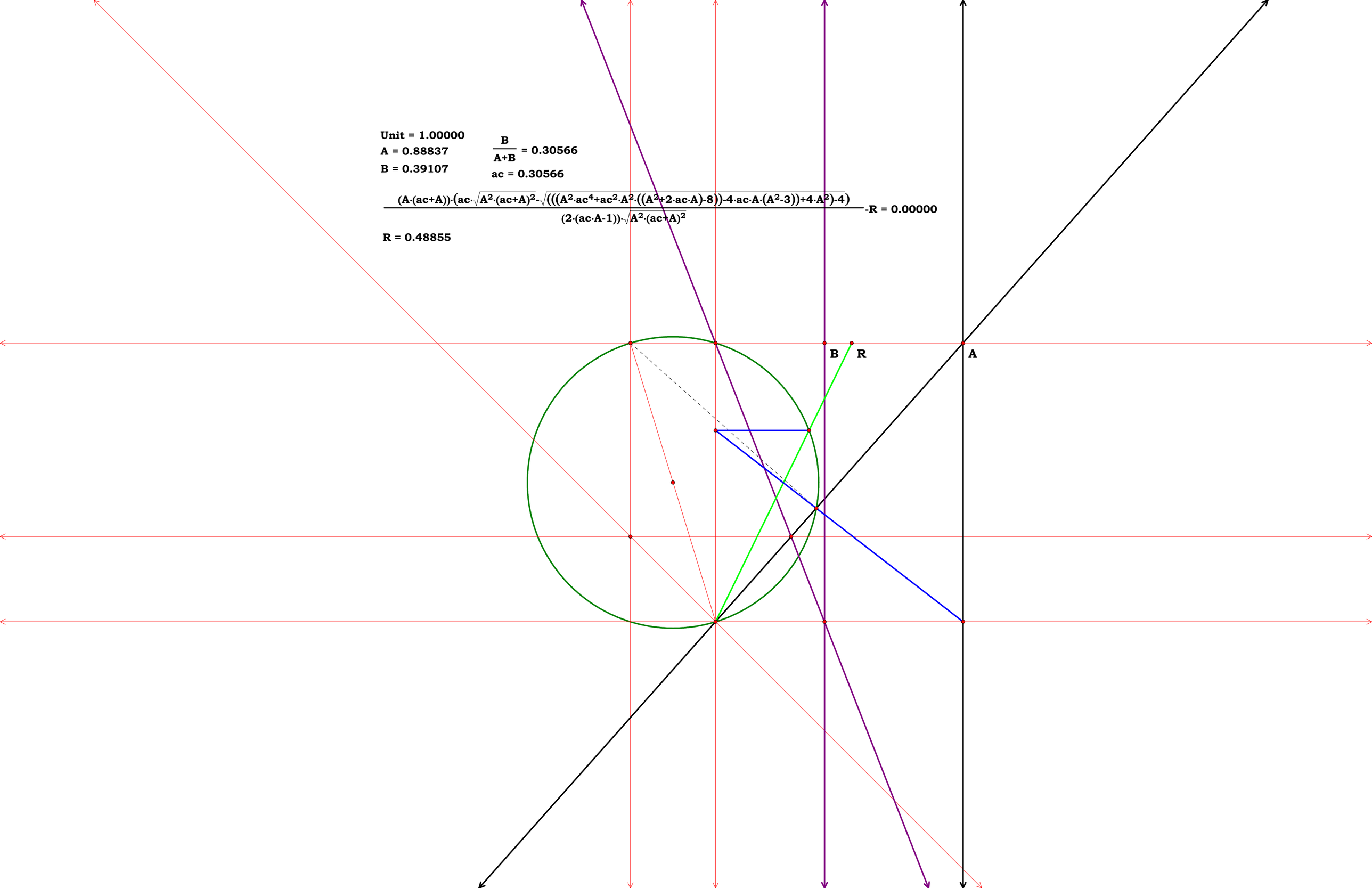
B = 0.39107

$$\frac{B}{A+B} = 0.30566$$

ac = 0.30566

$$\frac{(A\cdot(ac+A))\cdot\left(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{\left(\left(A^2\cdot ac^4+ac^2\cdot A^2\cdot\left(\left(A^2+2\cdot ac\cdot A\right)-8\right)\right)-4\cdot ac\cdot A\cdot\left(A^2-3\right)\right)+4\cdot A^2\right)-4}\right)}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}} - R = 0.00000$$

R = 0.48855



Unit = 1.00000

A = 0.80146

B = 1.28185

$\frac{A}{B}$ = 0.62524

ac = 0.62524

$$\frac{(A\cdot(ac+A))\cdot\left(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{(((A^2\cdot ac^4+ac^2\cdot A^2\cdot((A^2+2\cdot ac\cdot A)-8))-4\cdot ac\cdot A\cdot(A^2-3))+4\cdot A^2)-4}\right)}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}}$$

-R = 0.00000

R = 0.62712

R

A

B

Unit = 1.00000

A = 1.05252

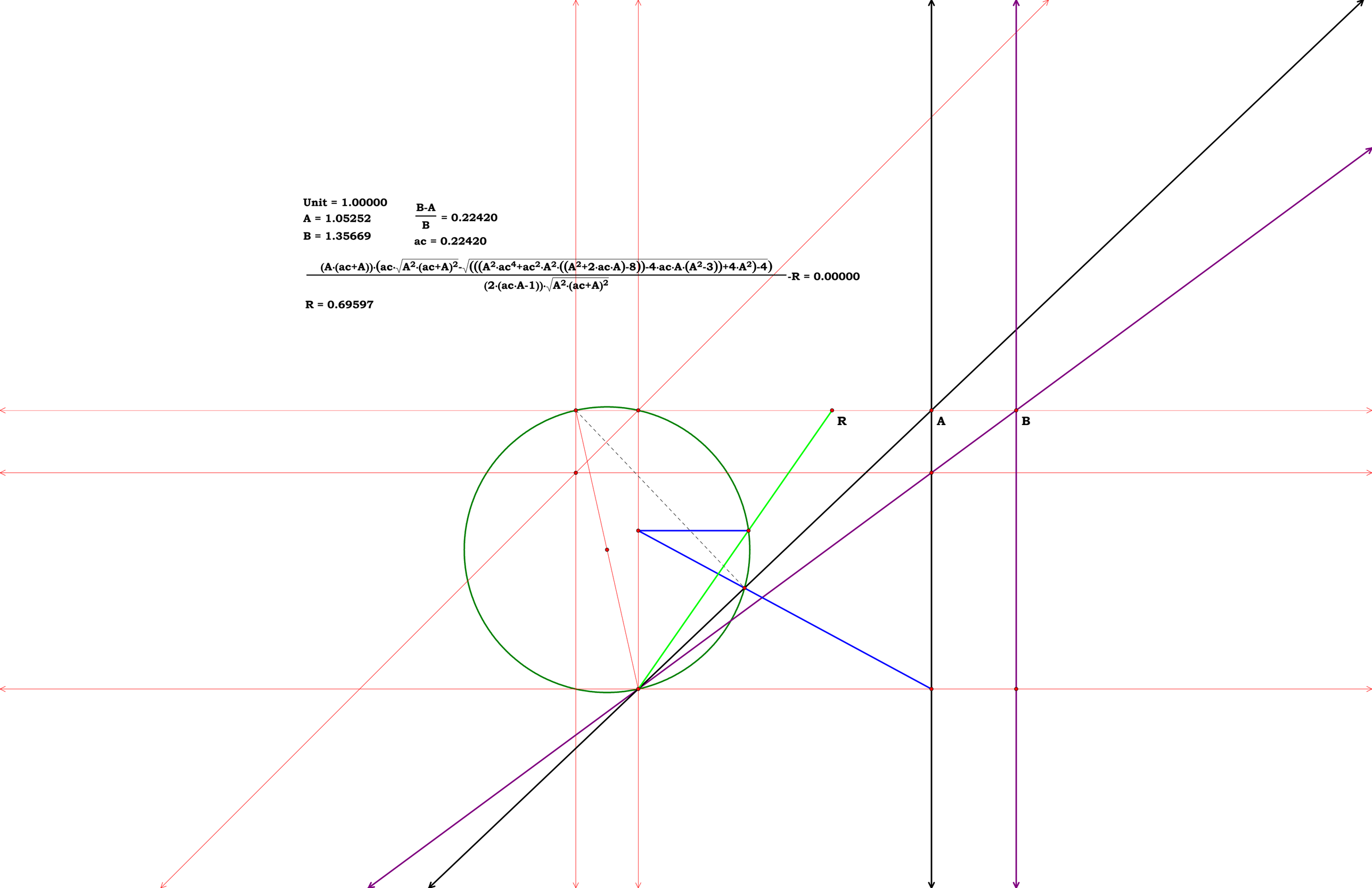
B = 1.35669

$\frac{B-A}{B} = 0.22420$

ac = 0.22420

$$\frac{(A\cdot(ac+A))\cdot\left(ac\cdot\sqrt{A^2\cdot(ac+A)^2}-\sqrt{(((A^2\cdot ac^4+ac^2\cdot A^2\cdot((A^2+2\cdot ac\cdot A)-8))-4\cdot ac\cdot A\cdot(A^2-3))+4\cdot A^2)-4}\right)}{(2\cdot(ac\cdot A-1))\cdot\sqrt{A^2\cdot(ac+A)^2}} - R = 0.00000$$

R = 0.69597



Unit = 1.00000

A = 1.09114

B = 0.51178

C = 0.55764

$\frac{A-B}{A}$ = 0.53097

ac = 0.53097

R = 1.78885

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A}$-R = 0.00000

c

a

B C

A

R

Unit = 1.00000

A = 1.23116

B = 0.45867

C = 0.85215

$\frac{B}{A}$ = 0.37255

ac = 0.37255

R = 2.25593

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A}$-R = 0.00000

c

a

B

C

A

R

Unit = 1.00000

A = 1.03321

B = 0.65179

C = 0.55764

$\frac{A}{A+B} = 0.61318$

ac = 0.61318

R = 2.03088

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A} - R = 0.00000$

c

a

C

B

A

R

Unit = 1.00000

A = 0.91251

B = 0.65179

C = 1.07907

$\frac{B}{A+B}$ = 0.41667

ac = 0.41667

R = 1.03258

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A}$ -R = 0.00000

c

a

B

A

R

C

Unit = 1.00000

A = 0.99458

B = 1.71638

C = 0.77732

$\frac{A}{B}$ = 0.57947

ac = 0.57947

R = 2.09496

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A}$ -R = 0.00000

c

a

C

A

B

R

Unit = 1.00000

A = 1.09597

B = 1.79846

C = 0.68800

$\frac{B-A}{B}$ = 0.39060

ac = 0.39060

R = 1.27197

$\frac{C\cdot((A^2+2\cdot ac\cdot A)-1)}{1-ac\cdot A}$ -R = 0.00000

c

a

C

A

R

B

Unit = 1.00000

A = 1.05252

B = 0.65420

C = 0.90285

$\frac{A-B}{A}$ = 0.37844

ac = 0.37844

R = 0.78700

$\frac{C-ac\cdot A\cdot C}{(ac\cdot(A+C)+A\cdot C)-1}$ -R = 0.00000

c

a

B

R

C

A

Unit = 1.00000

A = 1.53774

B = 0.23175

C = 1.02114

$\frac{B}{A}$ = 0.15071

ac = 0.15071

R = 0.82070

$\frac{C-ac\cdot A\cdot C}{(ac\cdot(A+C)+A\cdot C)-1}$ -R = 0.00000

c

a

B

R

C

A

Unit = 1.00000

A = 1.13218

B = 1.71397

C = 0.90044

$\frac{A}{A+B}$ = 0.39779

ac = 0.39779

R = 0.59769

$\frac{C-ac\cdot A\cdot C}{(ac\cdot(A+C)+A\cdot C)-1}$ -R = 0.00000

c

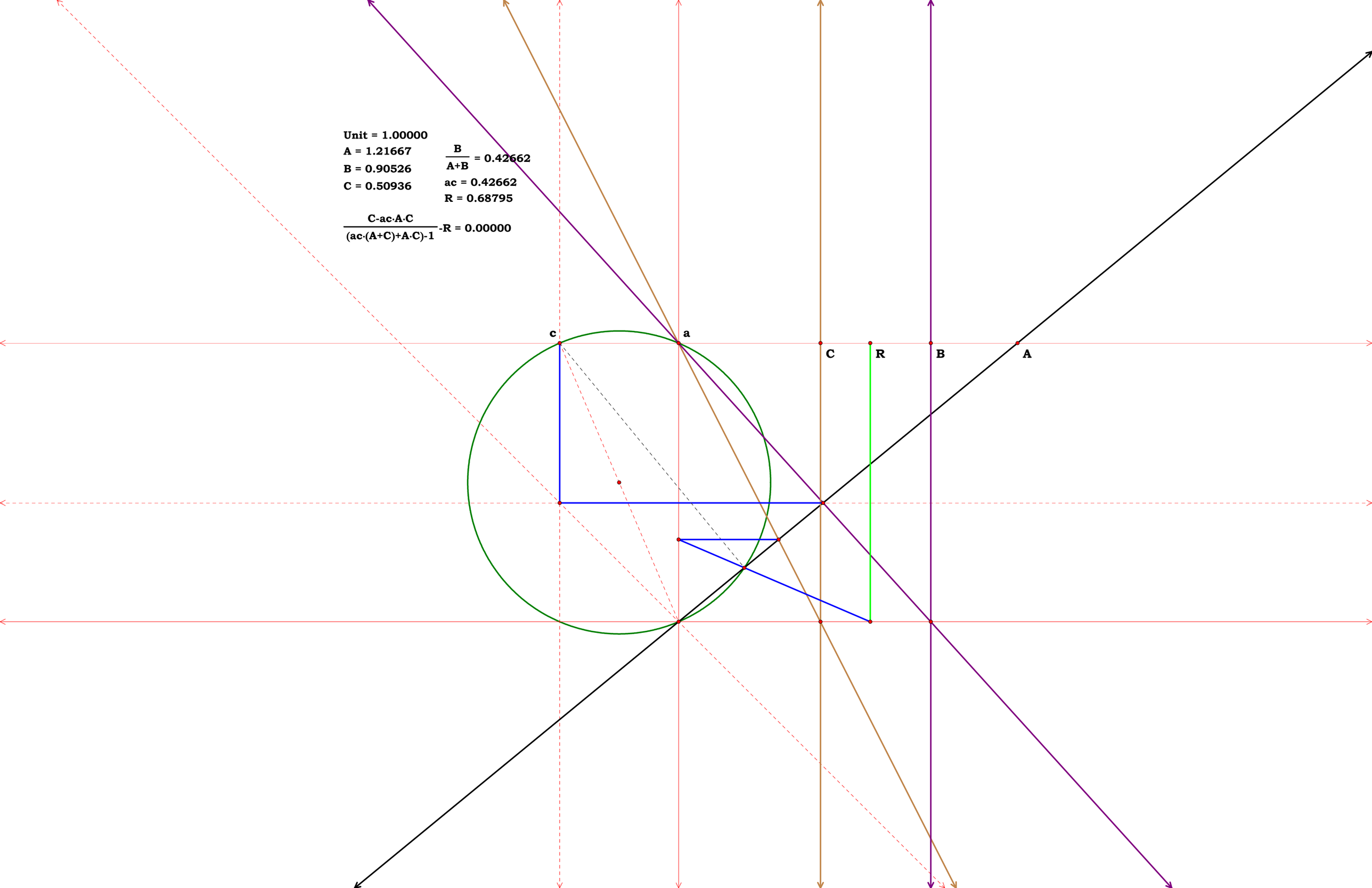
a

R

C

A

B


Unit = 1.00000
A = 1.21667
B = 0.90526
C = 0.50936
B / (A+B) = 0.42662
ac = 0.42662
R = 0.68795
(C-ac·A·C) / (ac·(A+C)+A·C)-1 -R = 0.00000
c
a
C
R
B
A

Unit = 1.00000

A = 0.79663

B = 1.12494

C = 0.53350

$\frac{A}{B}$ = 0.70815

ac = 0.70815

R = 0.63370

$\frac{C-ac\cdot A\cdot C}{(ac\cdot(A+C)+A\cdot C)-1}$ -R = 0.00000

c

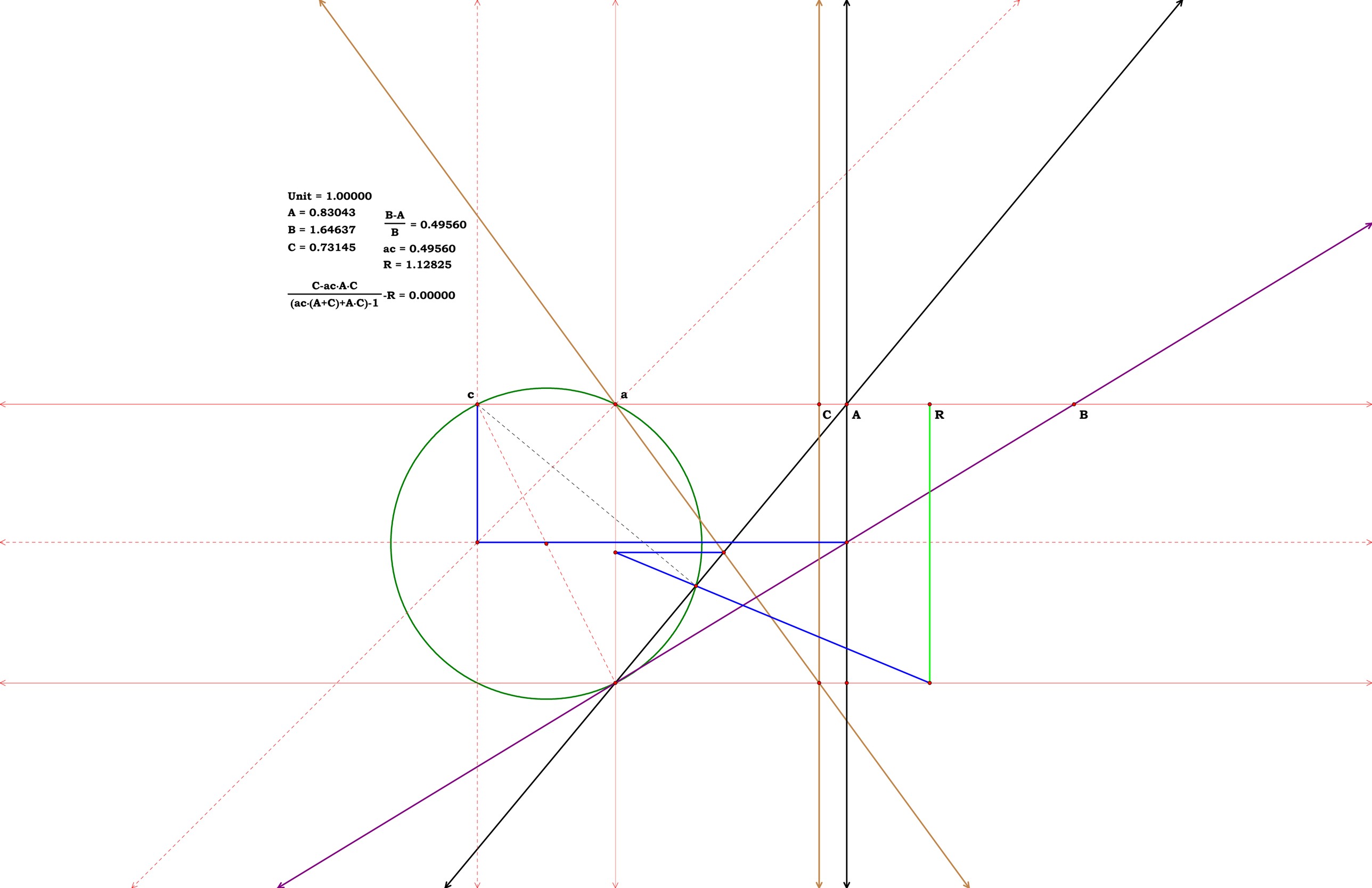
a

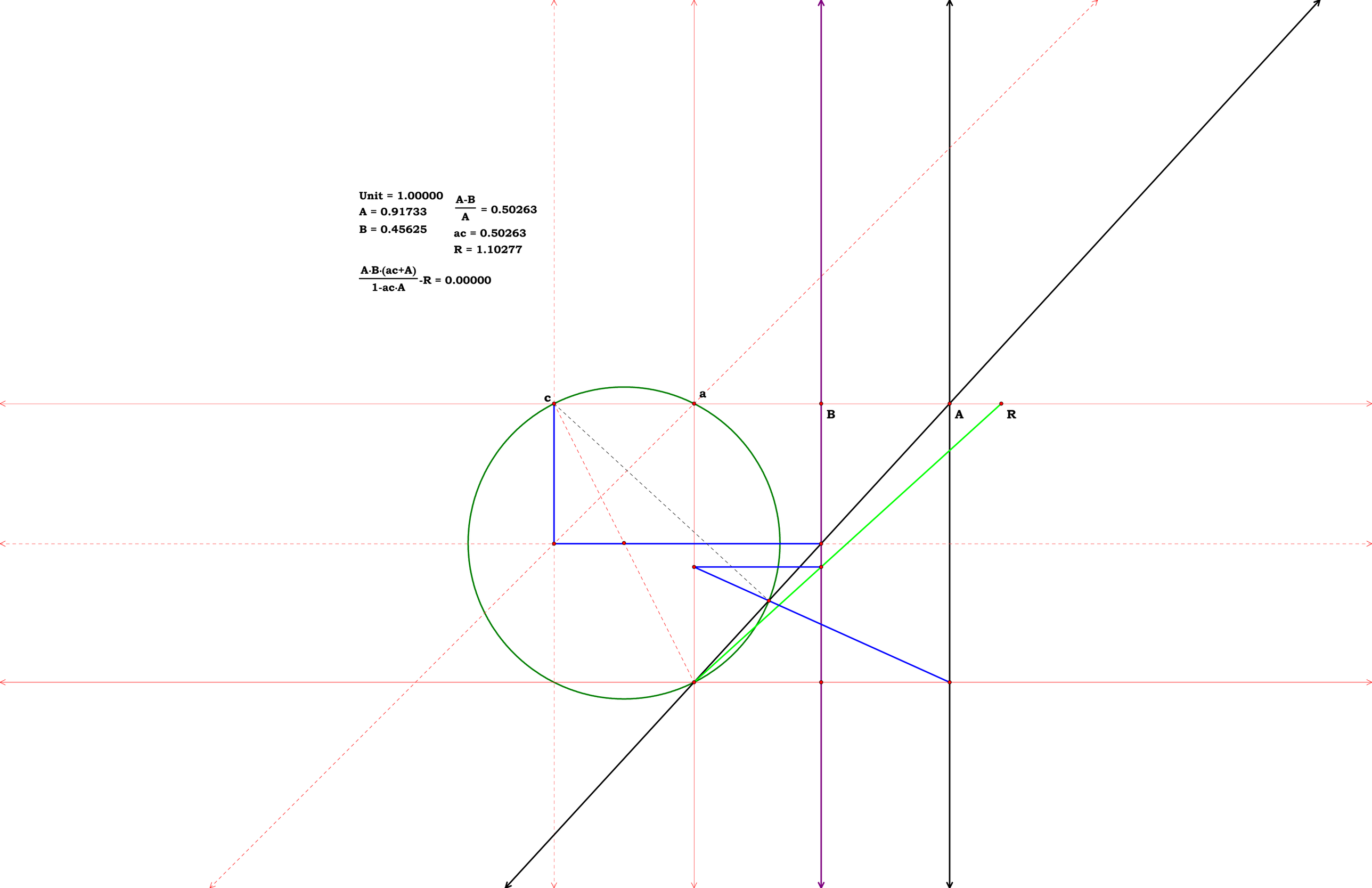
C

R

A

B


Unit = 1.00000
A = 0.83043
B = 1.64637
C = 0.73145
B-A / B = 0.49560
ac = 0.49560
R = 1.12825
C-ac·A·C / (ac·(A+C)+A·C)-1 -R = 0.00000
c
a
C
A
R
B


Unit = 1.00000
A = 0.91733
B = 0.45625
A-B / A = 0.50263
ac = 0.50263
R = 1.10277
A·B·(ac+A) / 1-ac·A -R = 0.00000
c
a
B
A
R

Unit = 1.00000

A = 0.89319

B = 0.55523

$\frac{B}{A}$ = 0.62162

ac = 0.62162

R = 1.68904

$\frac{A \cdot B \cdot (ac+A)}{1-ac \cdot A}$ - R = 0.00000

c

a

B

A

R

Unit = 1.00000

A = 0.94147

B = 0.82560

$\frac{A}{A+B} = 0.53279$

ac = 0.53279

R = 2.29921

$\frac{A \cdot B \cdot (ac+A)}{1-ac \cdot A} - R = 0.00000$

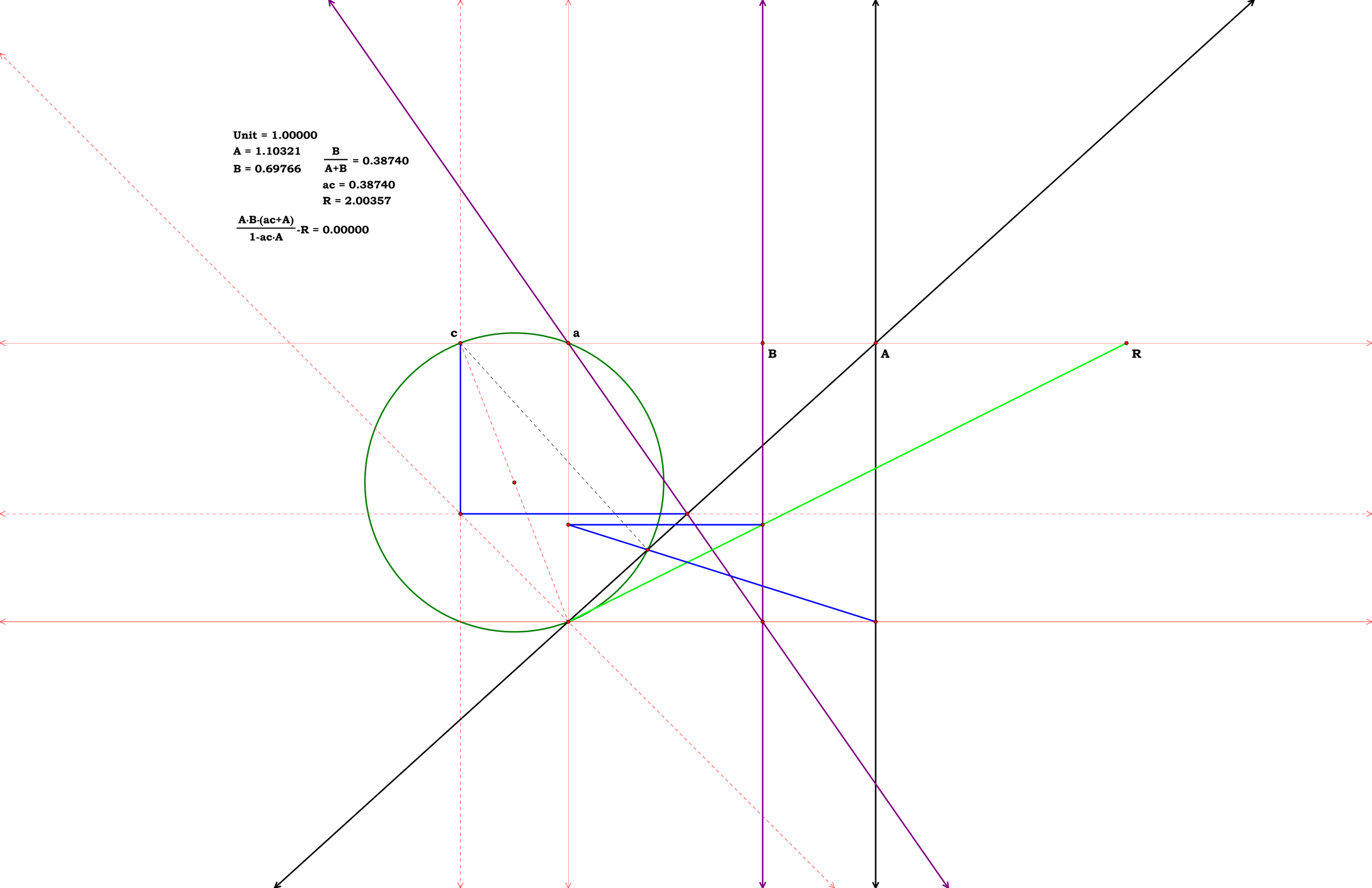
c

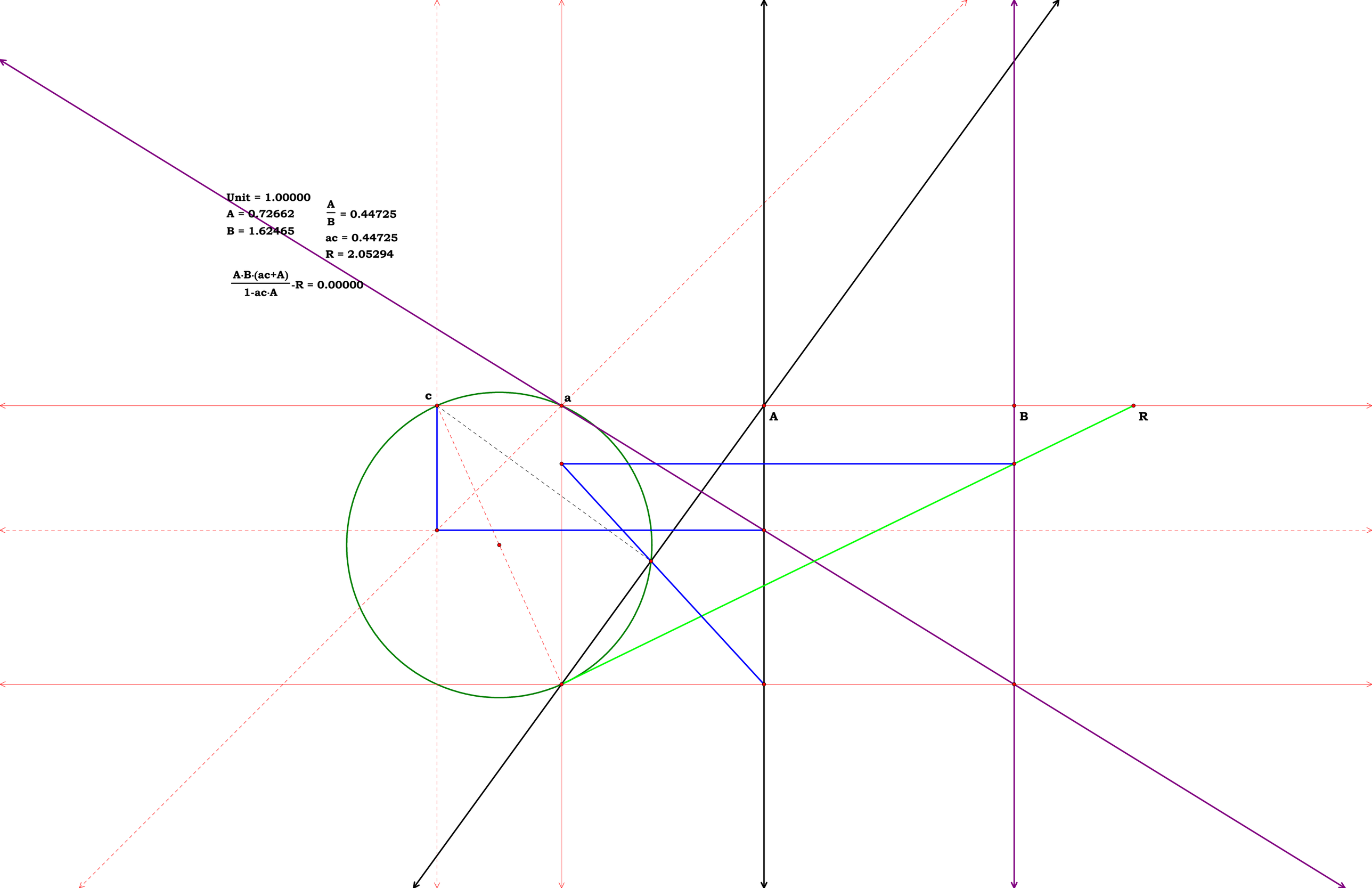
a

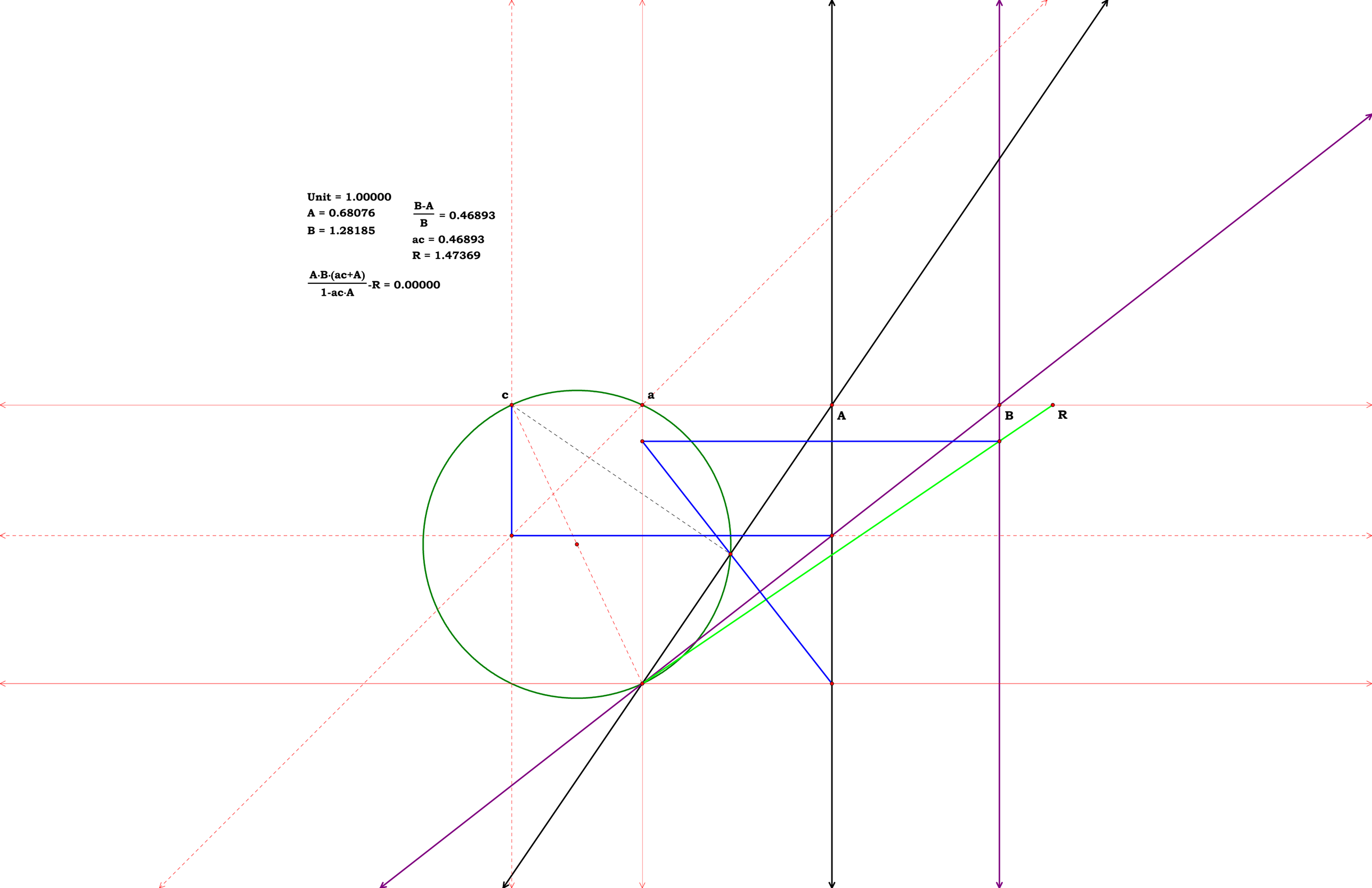
B

A

R


Unit = 1.00000
A = 1.10321
B = 0.69766
B / (A+B) = 0.38740
ac = 0.38740
R = 2.00357
A·B·(ac+A) / (1-ac·A) -R = 0.00000
c
a
B
A
R


Unit = 1.00000
A = 0.72662
B = 1.62465
A/B = 0.44725
ac = 0.44725
R = 2.05294
A·B·(ac+A)/(1-ac·A) -R = 0.00000
c
a
A
B
R


Unit = 1.00000
A = 0.68076
B = 1.28185
B-A / B = 0.46893
ac = 0.46893
R = 1.47369
A·B·(ac+A) / 1-ac·A -R = 0.00000
c
a
A
B
R

Unit = 1.00000

A = 0.91733

B = 0.38383

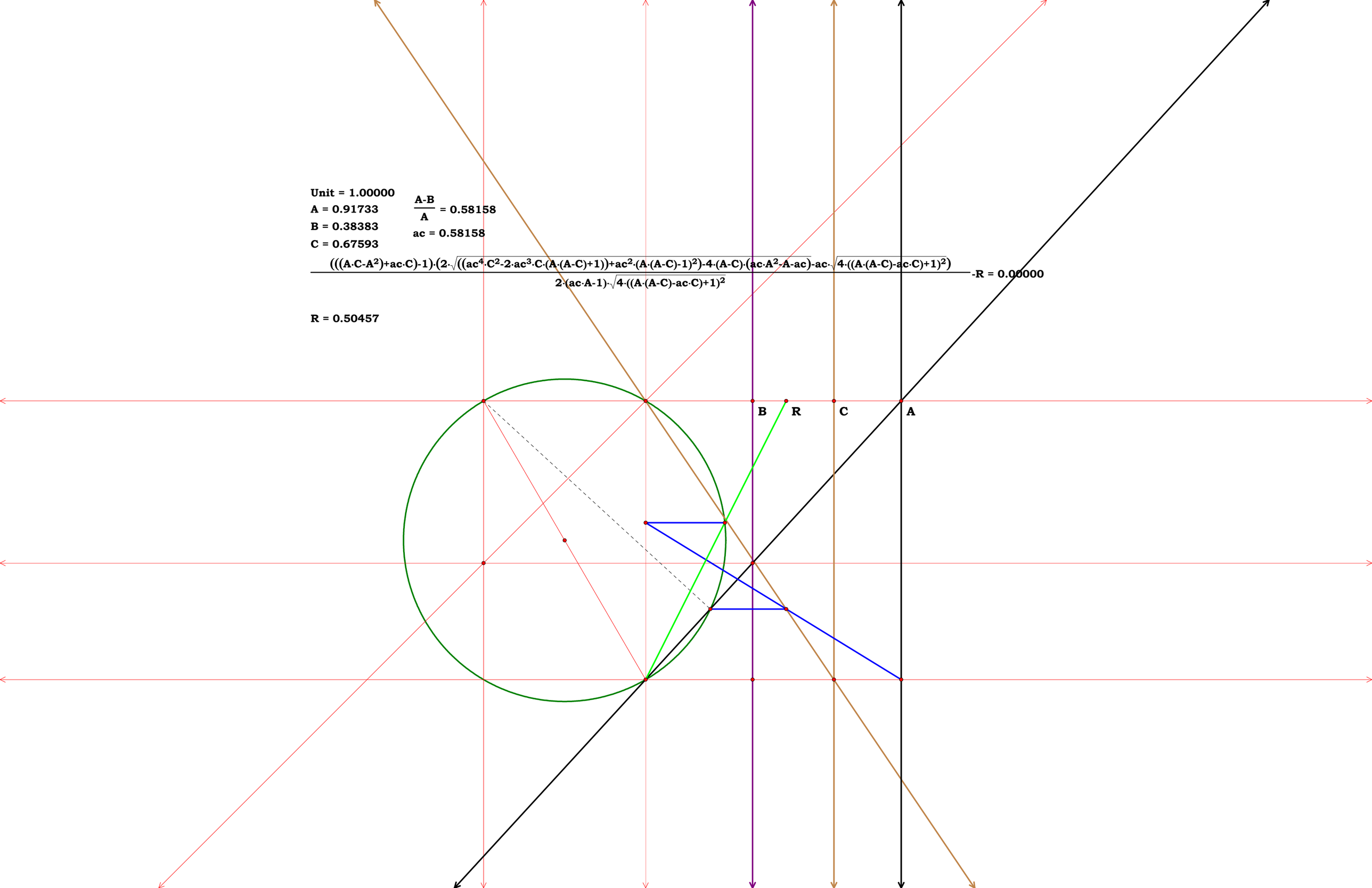
C = 0.67593

$\frac{A-B}{A} = 0.58158$

ac = 0.58158

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot\left(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}\right)}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

R = 0.50457



Unit = 1.00000

A = 0.91733

B = 0.44177

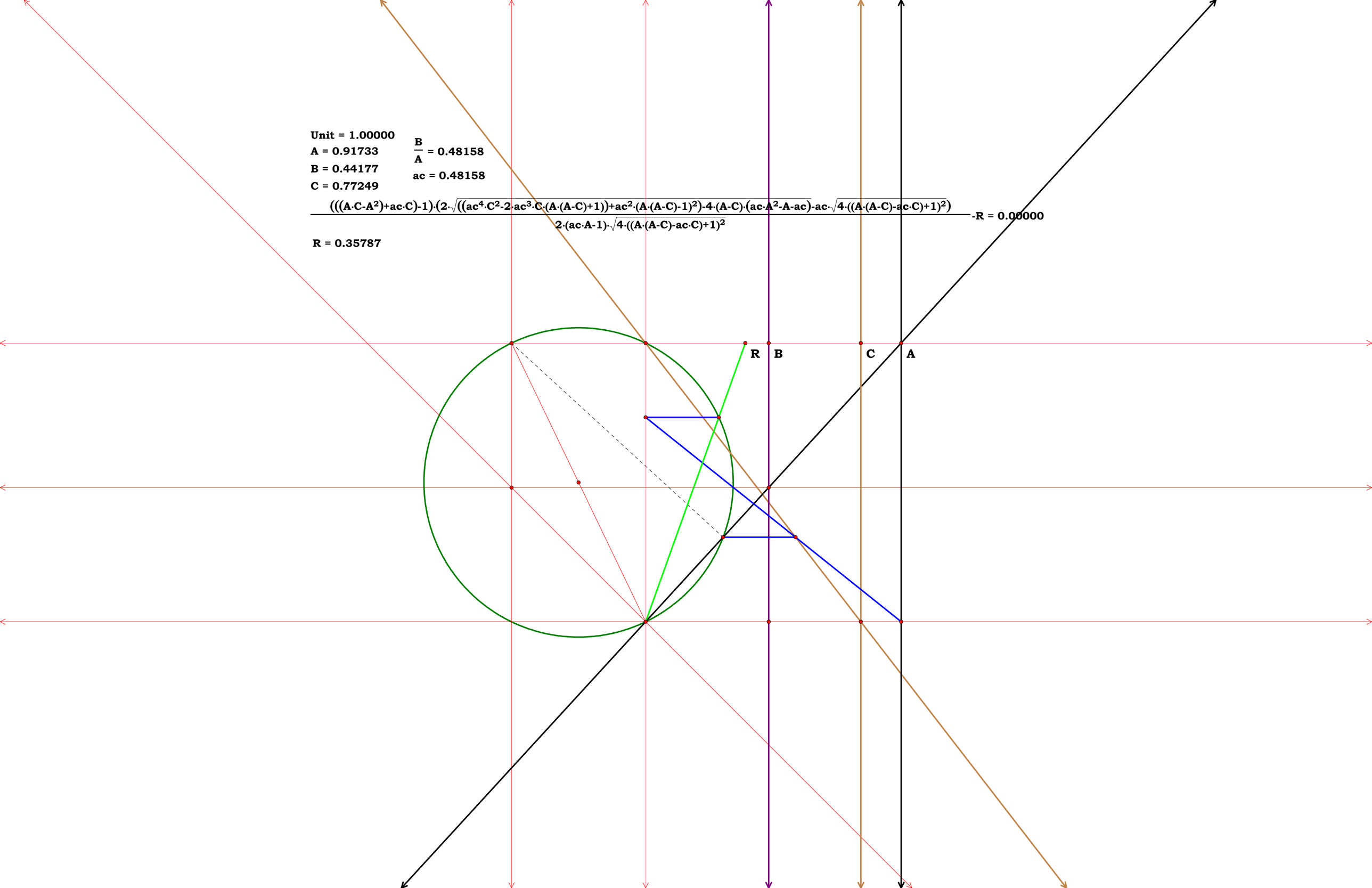
C = 0.77249

$\frac{B}{A}$ = 0.48158

ac = 0.48158

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2})}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

R = 0.35787



Unit = 1.00000

A = 0.91733

B = 0.43694

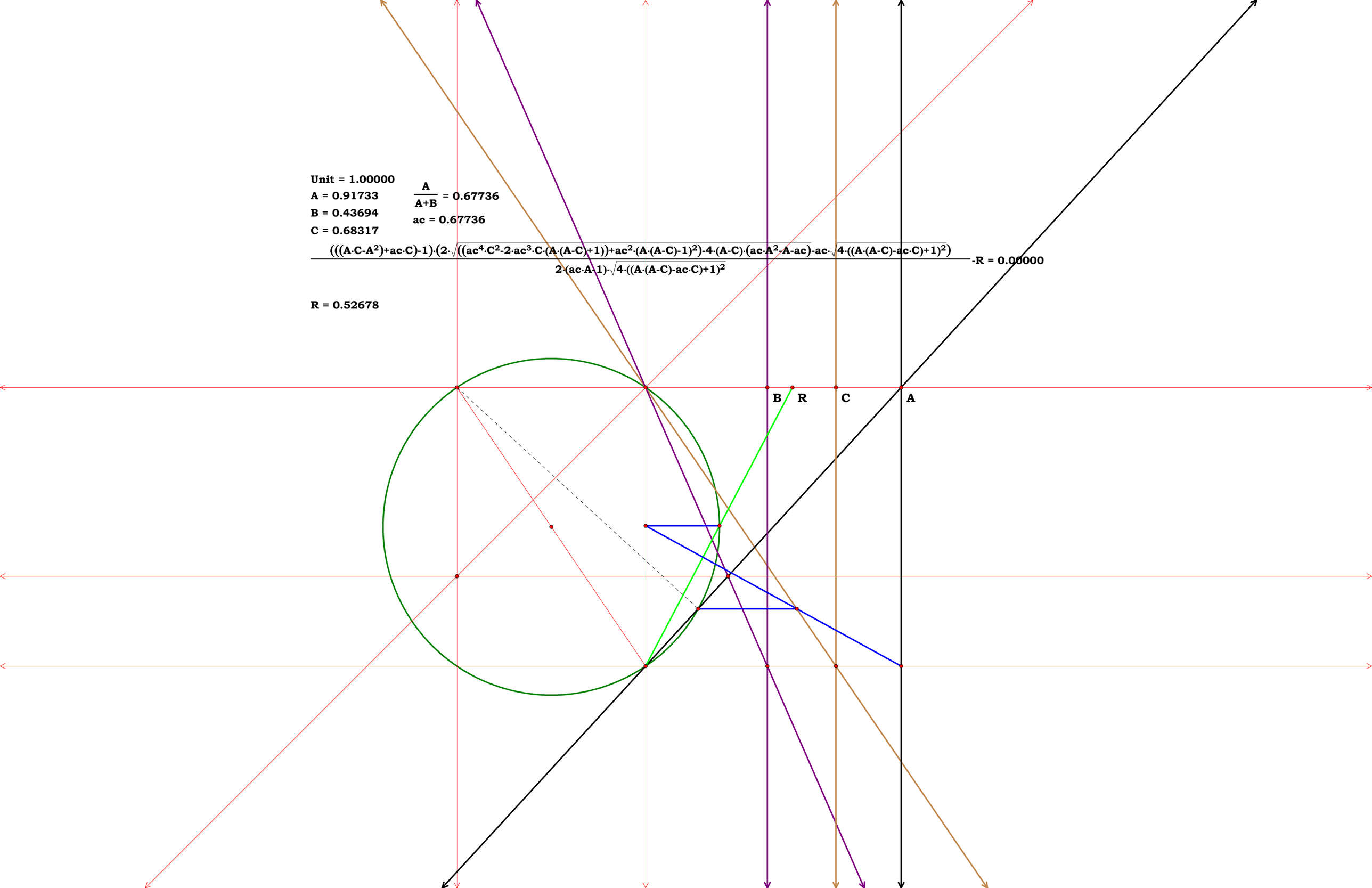
C = 0.68317

$\frac{A}{A+B} = 0.67736$

ac = 0.67736

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2})}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

R = 0.52678



Unit = 1.00000

A = 1.28427

B = 0.79905

C = 0.58902

$\frac{B}{A+B} = 0.38355$

ac = 0.38355

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2})}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

Show Segment

R = 1.00769

C B R A

Unit = 1.00000

A = 0.84250

B = 1.38324

C = 0.71938

$\frac{A}{B} = 0.60908$

ac = 0.60908

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot\left(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}\right)}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

R = 0.31879

R

C

A

B

Unit = 1.00000

A = 0.77973

B = 1.87571

C = 0.61317

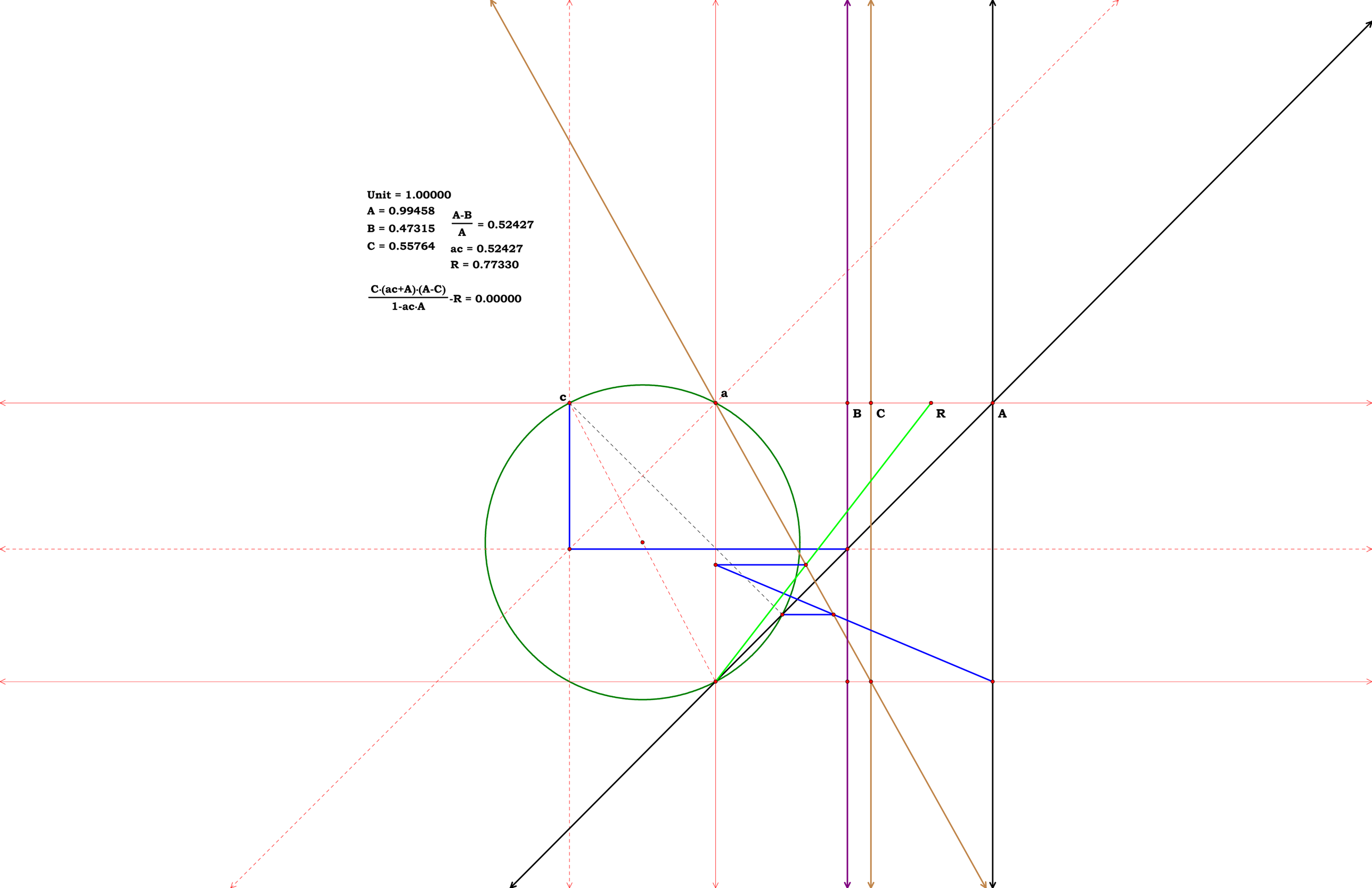
$\frac{B-A}{B} = 0.58430$

ac = 0.58430

$$\frac{(((A\cdot C-A^2)+ac\cdot C)-1)\cdot\left(2\cdot\sqrt{((ac^4\cdot C^2-2\cdot ac^3\cdot C\cdot(A\cdot(A-C)+1))+ac^2\cdot(A\cdot(A-C)-1)^2)-4\cdot(A-C)\cdot(ac\cdot A^2-A-ac)}-ac\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}\right)}{2\cdot(ac\cdot A-1)\cdot\sqrt{4\cdot((A\cdot(A-C)-ac\cdot C)+1)^2}} - R = 0.00000$$

R = 0.35326

R C A B


Unit = 1.00000
A = 0.99458
B = 0.47315
C = 0.55764
(A-B)/A = 0.52427
ac = 0.52427
R = 0.77330
C·(ac+A)·(A-C)/(1-ac·A) -R = 0.00000
c
a
B
C
R
A

Unit = 1.00000

A = 0.94147

B = 0.57695

C = 0.74835

$\frac{B}{A}$ = 0.61282

ac = 0.61282

R = 0.53099

$\frac{C\cdot(ac+A)\cdot(A-C)}{1-ac\cdot A}$ -R = 0.00000

c

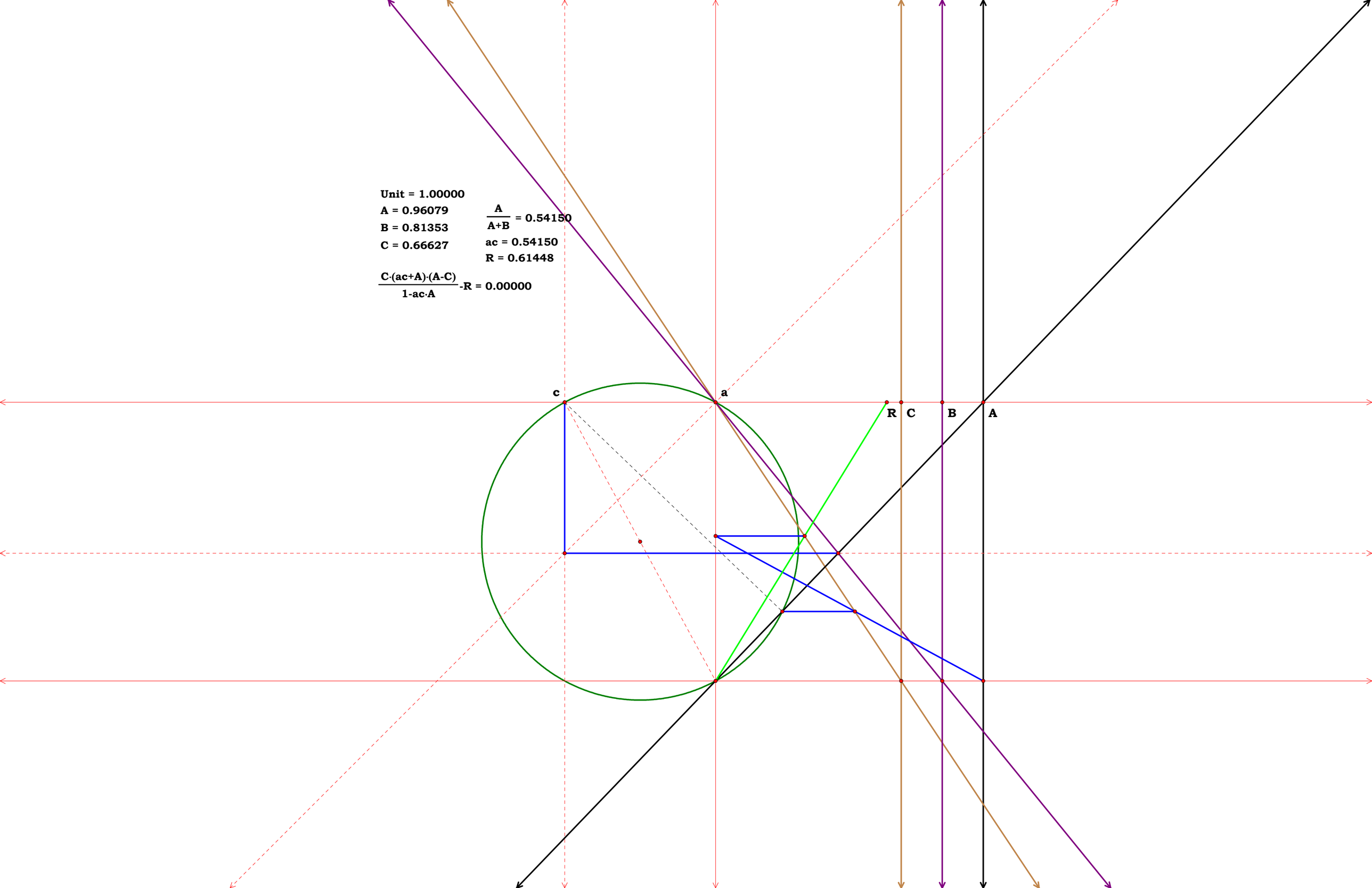
a

R

B

C

A


Unit = 1.00000
A = 0.96079
B = 0.81353
C = 0.66627
A / (A+B) = 0.54150
ac = 0.54150
R = 0.61448
C·(ac+A)·(A-C) / (1-ac·A) -R = 0.00000
c
a
R
C
B
A

Unit = 1.00000

A = 1.19495

B = 0.61799

C = 0.67352

$\frac{B}{A+B}$ = 0.34088

ac = 0.34088

R = 0.91007

$\frac{C\cdot(ac+A)\cdot(A-C)}{1-ac\cdot A}$ - R = 0.00000

c

a

B

C

R

A

Unit = 1.00000

A = 0.78698

B = 1.22874

C = 0.55764

$\frac{A}{B}$ = 0.64047

ac = 0.64047

R = 0.36807

$\frac{C\cdot(ac+A)\cdot(A-C)}{1-ac\cdot A}$ -R = 0.00000

c

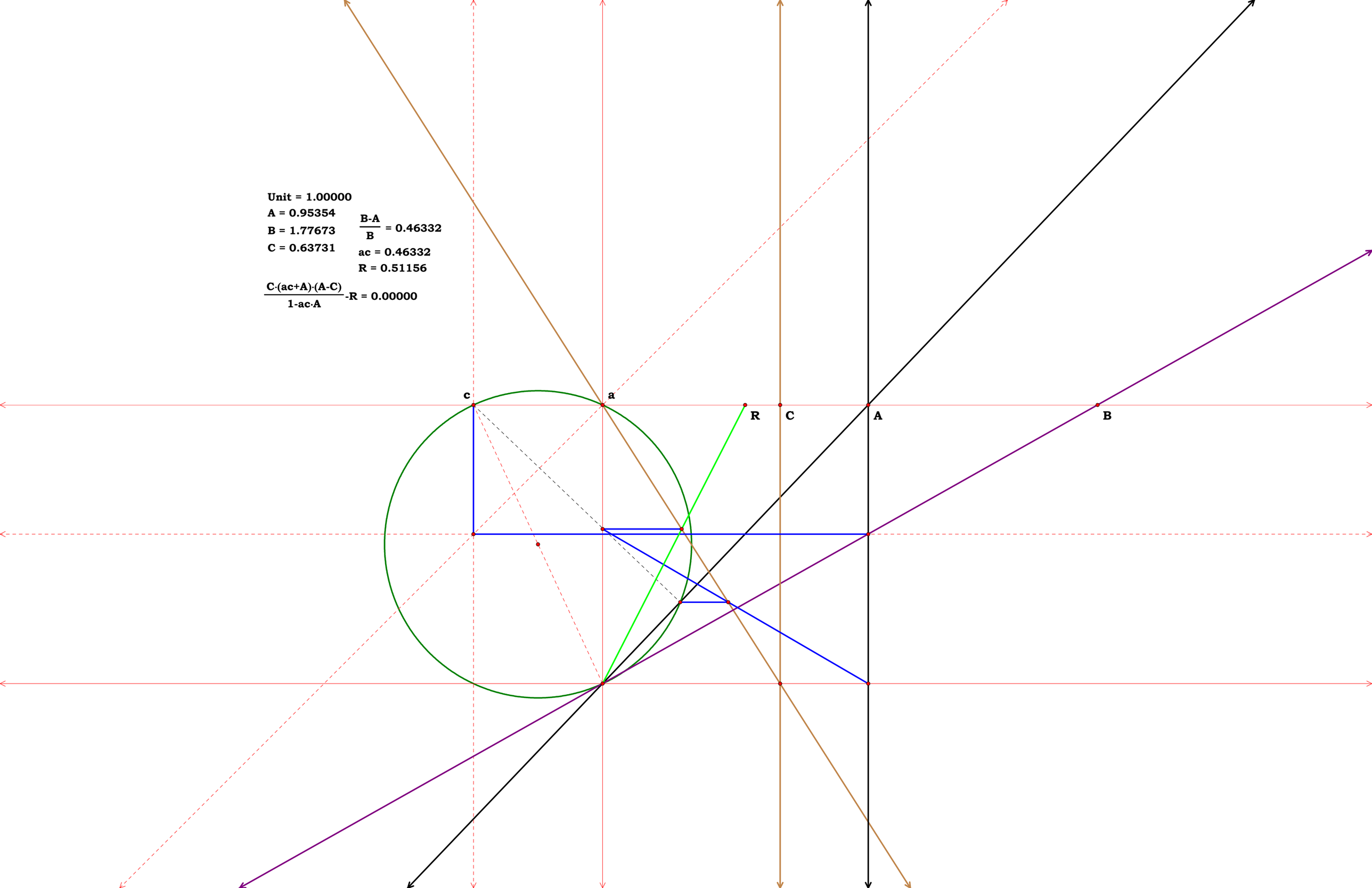
a

R

C

A

B


Unit = 1.00000
A = 0.95354
B = 1.77673
C = 0.63731
B-A / B = 0.46332
ac = 0.46332
R = 0.51156
C·(ac+A)·(A-C) / 1-ac·A -R = 0.00000
c
a
R
C
A
B

Unit = 1.00000

A = 1.17564

B = 0.87147

C = 0.59385

$\frac{A-B}{A}$ = 0.25873

ac = 0.25873

R = 1.91659

$\frac{B\cdot((A^2-A\cdot C-ac\cdot C)+1)}{1-ac\cdot A}$-R = 0.00000

c

a

C

B

A

R

Unit = 1.00000

A = 0.87388

B = 0.64938

C = 0.55764

$\frac{B}{A}$ = 0.74309

ac = 0.74309

R = 1.59642

$\frac{B\cdot((A^2-A\cdot C-ac\cdot C)+1)}{1-ac\cdot A}$-R = 0.00000

c

a

C B

A

R

Unit = 1.00000

A = 0.89078

B = 0.43211

C = 0.76042

$\frac{A}{A+B} = 0.67336$

ac = 0.67336

R = 0.65228

$\frac{B\cdot((A^2-A\cdot C-ac\cdot C)+1)}{1-ac\cdot A}-R = 0.00000$

c

a

B

R

C

A

Unit = 1.00000

A = 1.19736

B = 0.49729

C = 0.77732

$\frac{B}{A+B}$ = 0.29345

ac = 0.29345

R = 0.97738

$\frac{B\cdot((A^2-A\cdot C-ac\cdot C)+1)}{1-ac\cdot A}$-R = 0.00000

c

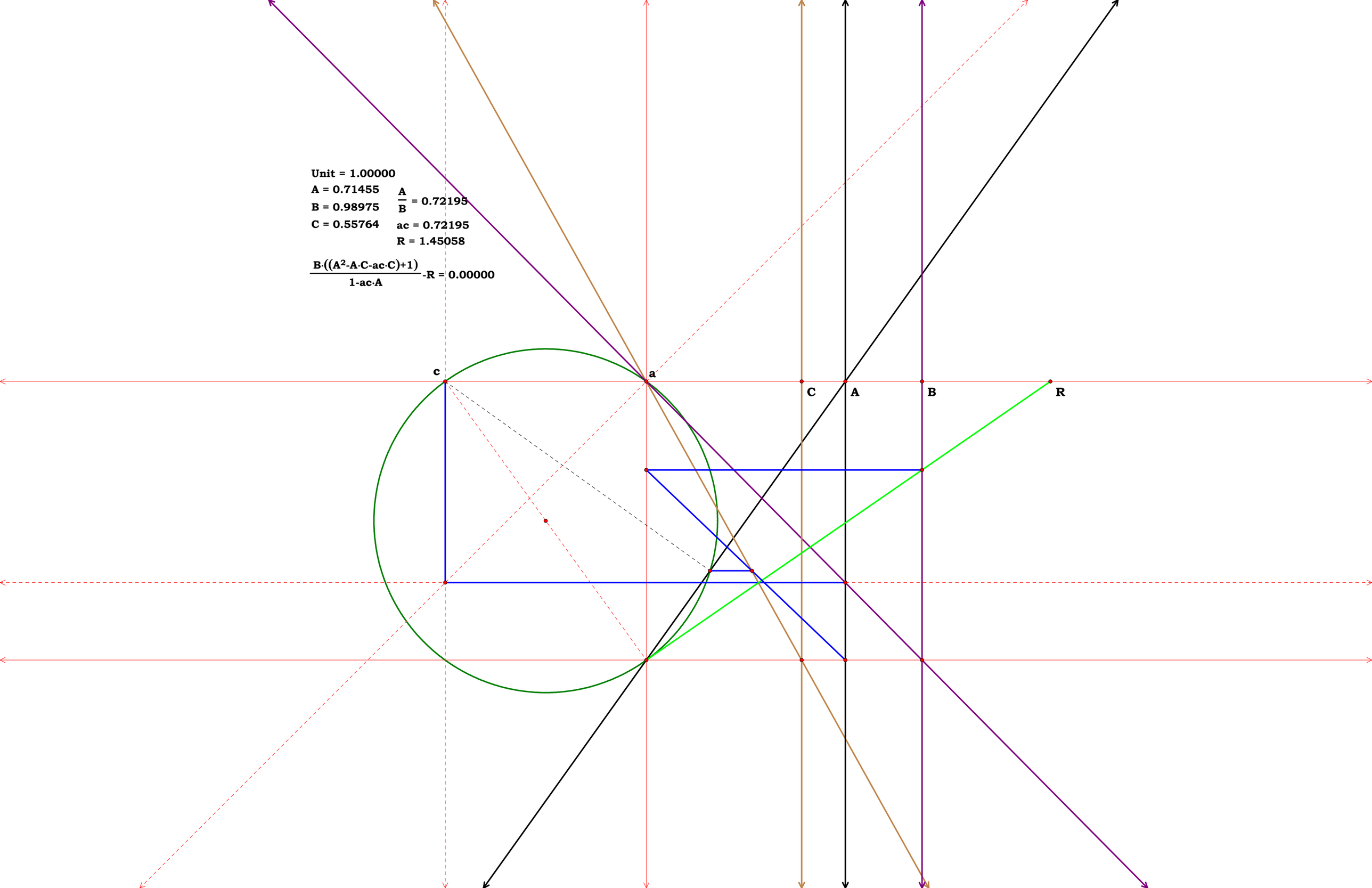
a

B

C

R

A


Unit = 1.00000
A = 0.71455
B = 0.98975
C = 0.55764
A/B = 0.72195
ac = 0.72195
R = 1.45058
B·((A²-A·C-ac·C)+1)/(1-ac·A) -R = 0.00000
c
a
C
A
B
R

Unit = 1.00000

A = 0.96803

B = 1.48222

C = 0.83284

$\frac{B-A}{B} = 0.34691$

ac = 0.34691

$\frac{B\cdot((A^2-A\cdot C-ac\cdot C)+1)}{1-ac\cdot A}-R = 0.00000$

R = 1.87891

c

a

C

A

B

R

Unit = 1.00000

A = 0.29693

B = 0.24623

C = 0.68076

$\frac{A-B}{A}$ = 0.17073

ac = 0.17073

R = 0.13279

$$\frac{(2\cdot C^4\cdot\sqrt{(C^2+1)^2})}{(C^2+1)\cdot(\sqrt{C^4+2\cdot C^2+1}\cdot((C^2-2\cdot ac\cdot C^2)+1)+(C^2+1)\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1})}$$ R = 0.00000

c a R B A C

Unit = 1.00000

A = 1.42187

B = 0.43211

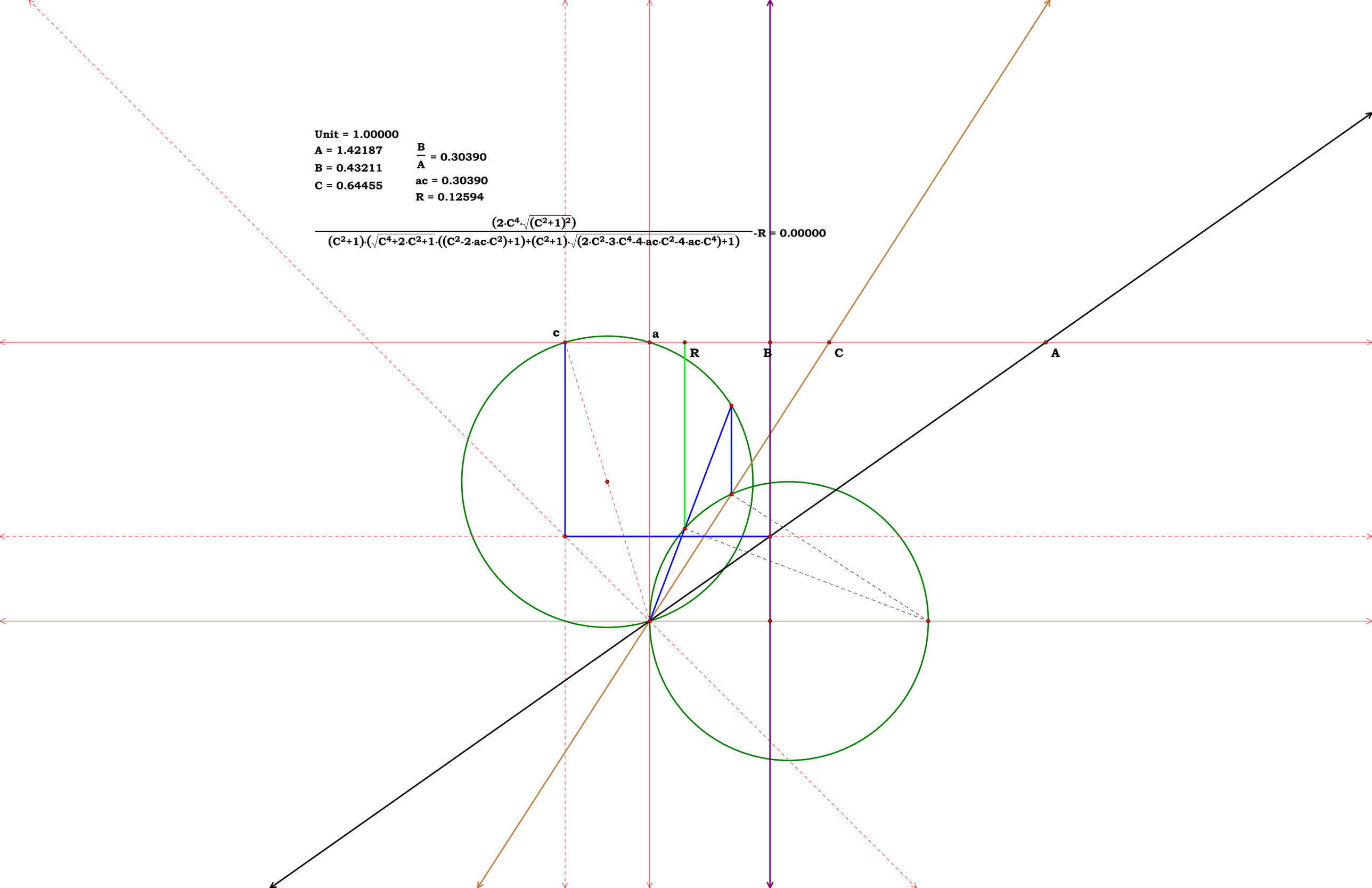
C = 0.64455

$\frac{B}{A}$ = 0.30390

ac = 0.30390

R = 0.12594

$$\frac{(2\cdot C^4\cdot\sqrt{(C^2+1)^2})}{(C^2+1)\cdot(\sqrt{C^4+2\cdot C^2+1}\cdot((C^2-2\cdot ac\cdot C^2)+1)+(C^2+1)\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1})}-R = 0.00000$$



Unit = 1.00000

A = 0.19071

B = 0.39107

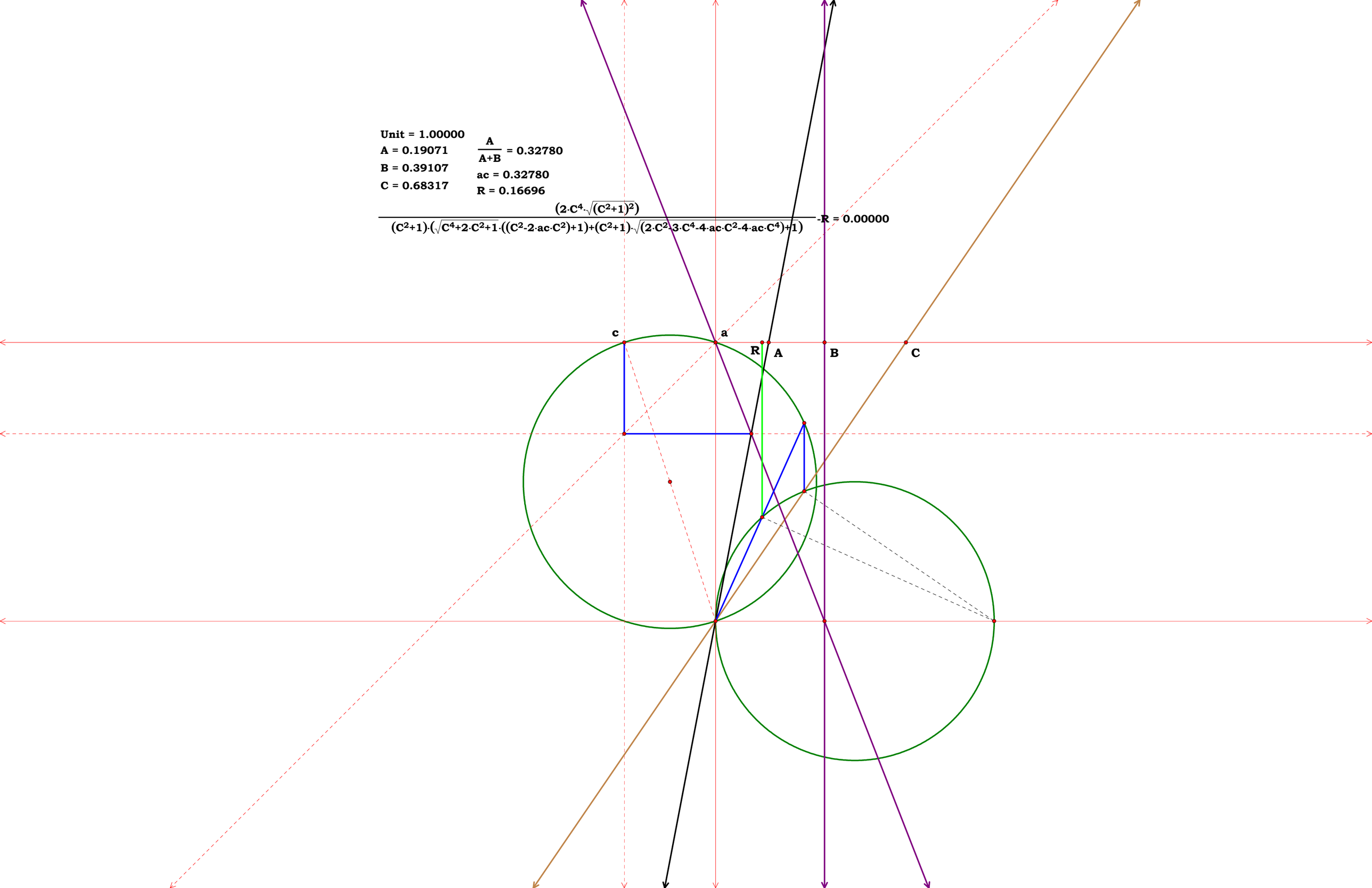
C = 0.68317

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.16696

$$\frac{(2\cdot C^4\cdot\sqrt{(C^2+1)^2})}{(C^2+1)\cdot(\sqrt{C^4+2\cdot C^2+1}\cdot((C^2-2\cdot ac\cdot C^2)+1)+(C^2+1)\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1})} - R = 0.00000$$



Unit = 1.00000
A = 1.43152
B = 0.49971
C = 0.71455

$\frac{B}{A+B} = 0.25875$

ac = 0.25875
R = 0.18069

$$\frac{(2\cdot C^4\cdot\sqrt{(C^2+1)^2})}{(C^2+1)\cdot(\sqrt{C^4+2\cdot C^2+1}\cdot((C^2-2\cdot ac\cdot C^2)+1)+(C^2+1)\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1})} - R = 0.00000$$

c
a
R
B
C
A

Unit = 1.00000

A = 0.64213

B = 2.26919

C = 0.72904

$\frac{A}{B}$ = 0.28298

ac = 0.28298

R = 0.20806

$$\frac{\left(2\cdot C^4\cdot\sqrt{(C^2+1)^2}\right)}{(C^2+1)\cdot\left(\sqrt{C^4+2\cdot C^2+1}\cdot\left((C^2-2\cdot ac\cdot C^2)+1\right)+(C^2+1)\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}\right)}-R = 0.00000$$

c

a

R

A

C

B

Unit = 1.00000

A = 1.39048

B = 1.58119

C = 0.82077

$\frac{B-A}{B} = 0.12061$

ac = 0.12061

R = 0.24923

$\frac{(2 \cdot C^4 \cdot \sqrt{(C^2+1)^2})}{(C^2+1) \cdot (\sqrt{C^4+2 \cdot C^2+1} \cdot ((C^2-2 \cdot ac \cdot C^2)+1)+(C^2+1) \cdot \sqrt{(2 \cdot C^2-3 \cdot C^4-4 \cdot ac \cdot C^2-4 \cdot ac \cdot C^4)+1})} - R = 0.00000$

c

a

R

C

A

B

Unit = 1.00000

A = 1.15391

B = 1.04045

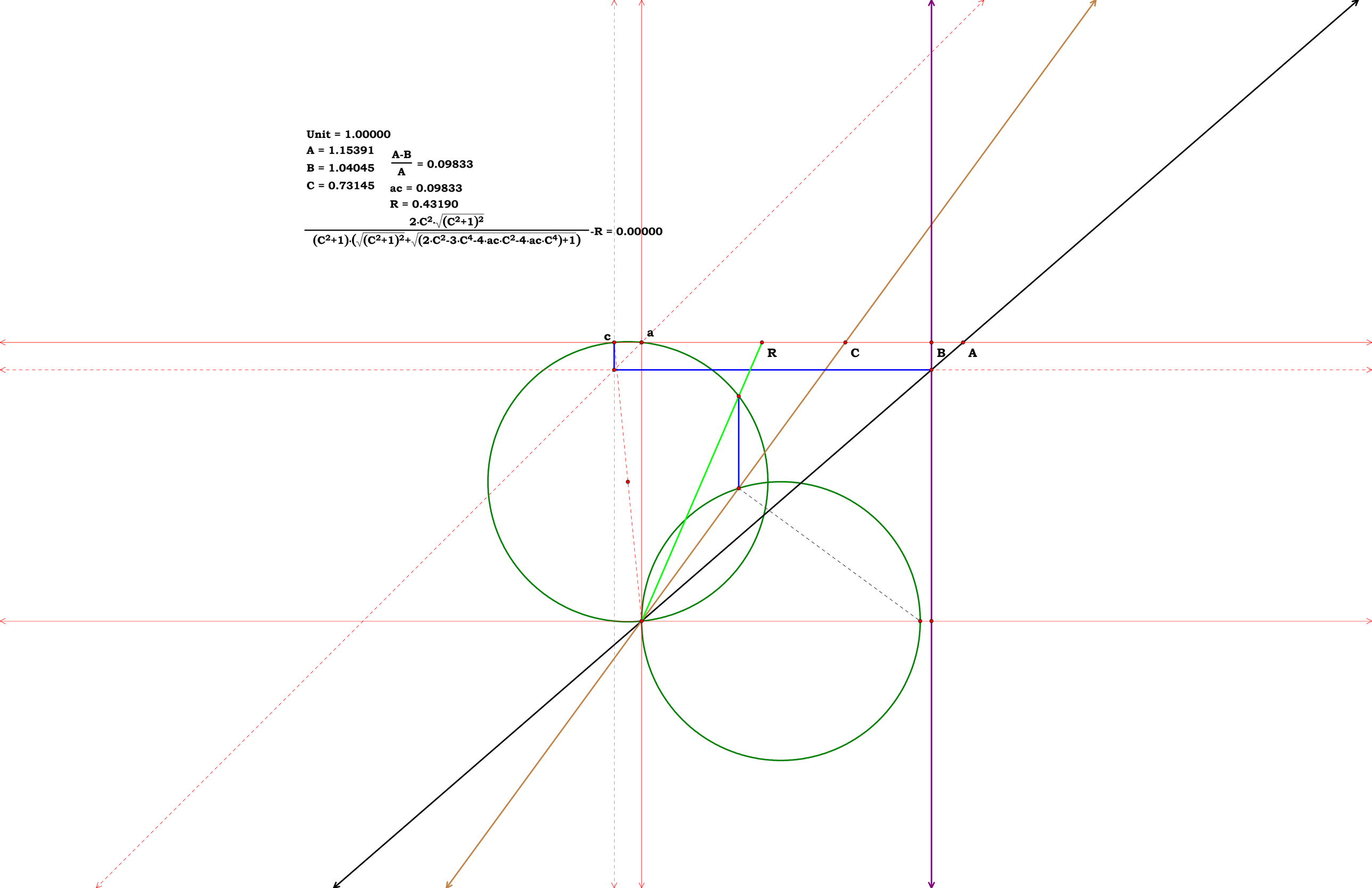
C = 0.73145

$\frac{A-B}{A} = 0.09833$

ac = 0.09833

R = 0.43190

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2}+\sqrt{(2 \cdot C^2-3 \cdot C^4-4 \cdot ac \cdot C^2-4 \cdot ac \cdot C^4)+1}\right)} - R = 0.00000$



Unit = 1.00000

A = 2.01331

B = 1.04286

C = 0.55764

$\frac{B}{A}$ = 0.51799

ac = 0.51799

R = 0.30958

$$\frac{2\cdot C^2\cdot\sqrt{(C^2+1)^2}}{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}+\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}\right)}-R = 0.00000$$

c

a

R

C

B

A

Unit = 1.00000

A = 1.38324

B = 1.63189

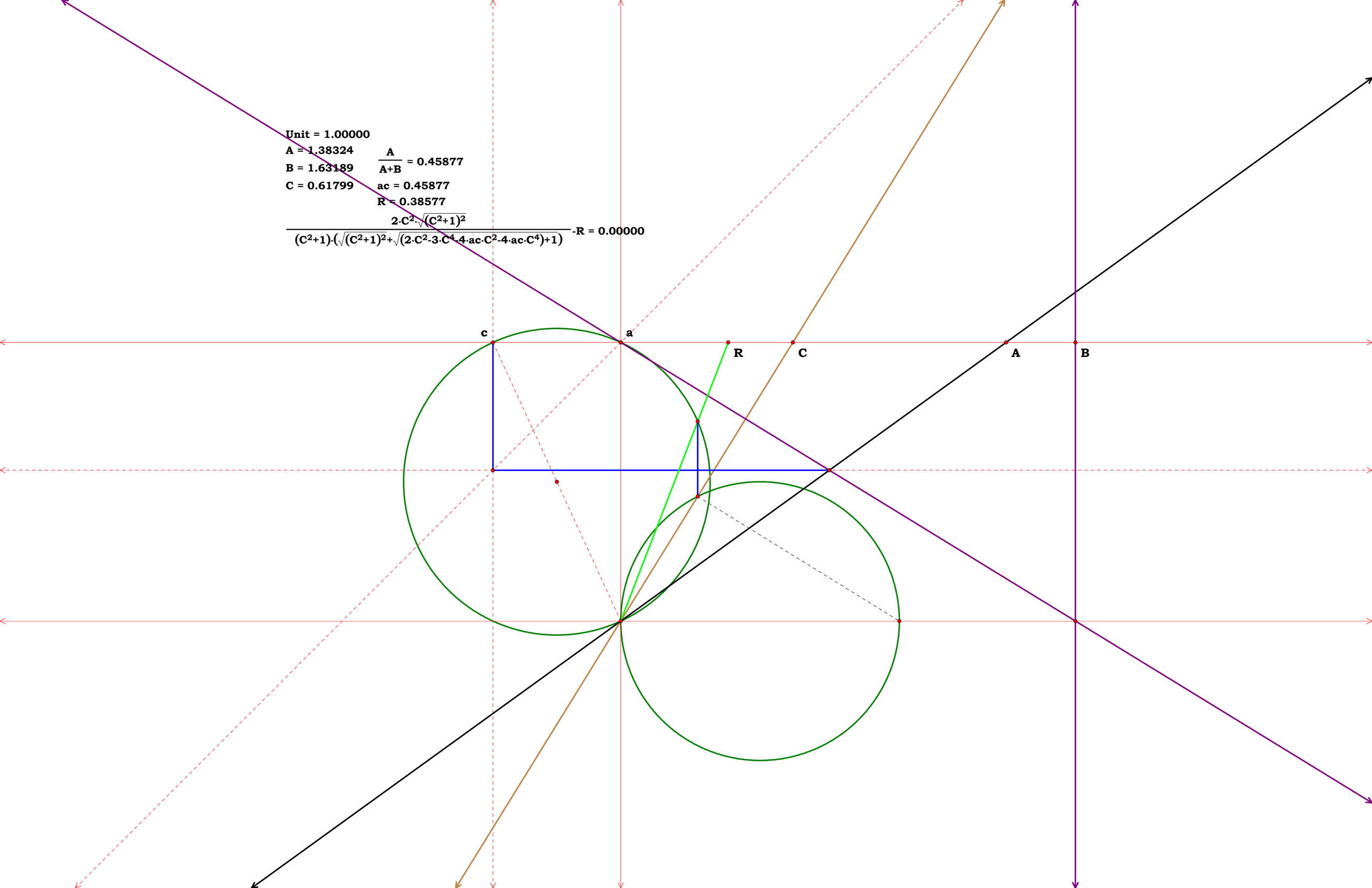
C = 0.61799

$\frac{A}{A+B} = 0.45877$

ac = 0.45877

R = 0.38577

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2} + \sqrt{(2 \cdot C^2 - 3 \cdot C^4 - 4 \cdot ac \cdot C^2 - 4 \cdot ac \cdot C^4) + 1}\right)} - R = 0.00000$



Unit = 1.00000

A = 1.49429

B = 1.20943

C = 0.61799

$\frac{B}{A+B} = 0.44732$

ac = 0.44732

R = 0.38193

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2}+\sqrt{(2 \cdot C^2-3 \cdot C^4-4 \cdot ac \cdot C^2-4 \cdot ac \cdot C^4)+1}\right)} - R = 0.00000$

c

a

R

C

B

A

Unit = 1.00000

A = 0.43935

B = 1.05976

C = 0.54799

$\frac{A}{B}$ = 0.41458

ac = 0.41458

R = 0.28243

$$\frac{2\cdot C^2\cdot\sqrt{(C^2+1)^2}}{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}+\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}\right)}-R = 0.00000$$

c

a

R

A

C

B

Unit = 1.00000

A = 1.06459

B = 1.34220

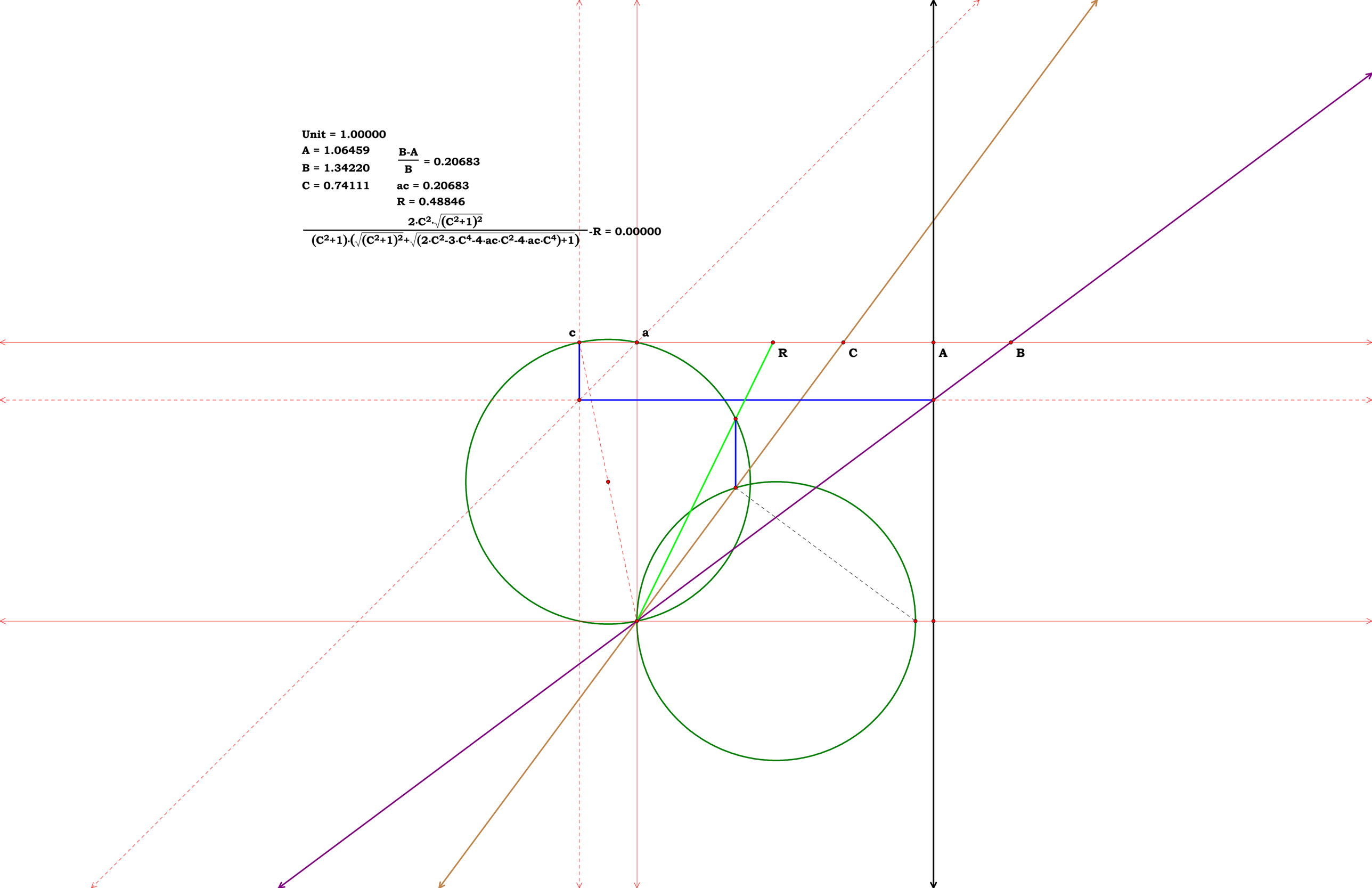
C = 0.74111

$\frac{B-A}{B}$ = 0.20683

ac = 0.20683

R = 0.48846

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2}+\sqrt{(2 \cdot C^2-3 \cdot C^4-4 \cdot ac \cdot C^2-4 \cdot ac \cdot C^4)+1}\right)}$ -R = 0.00000



Unit = 1.00000

A = 1.31806

B = 1.13942

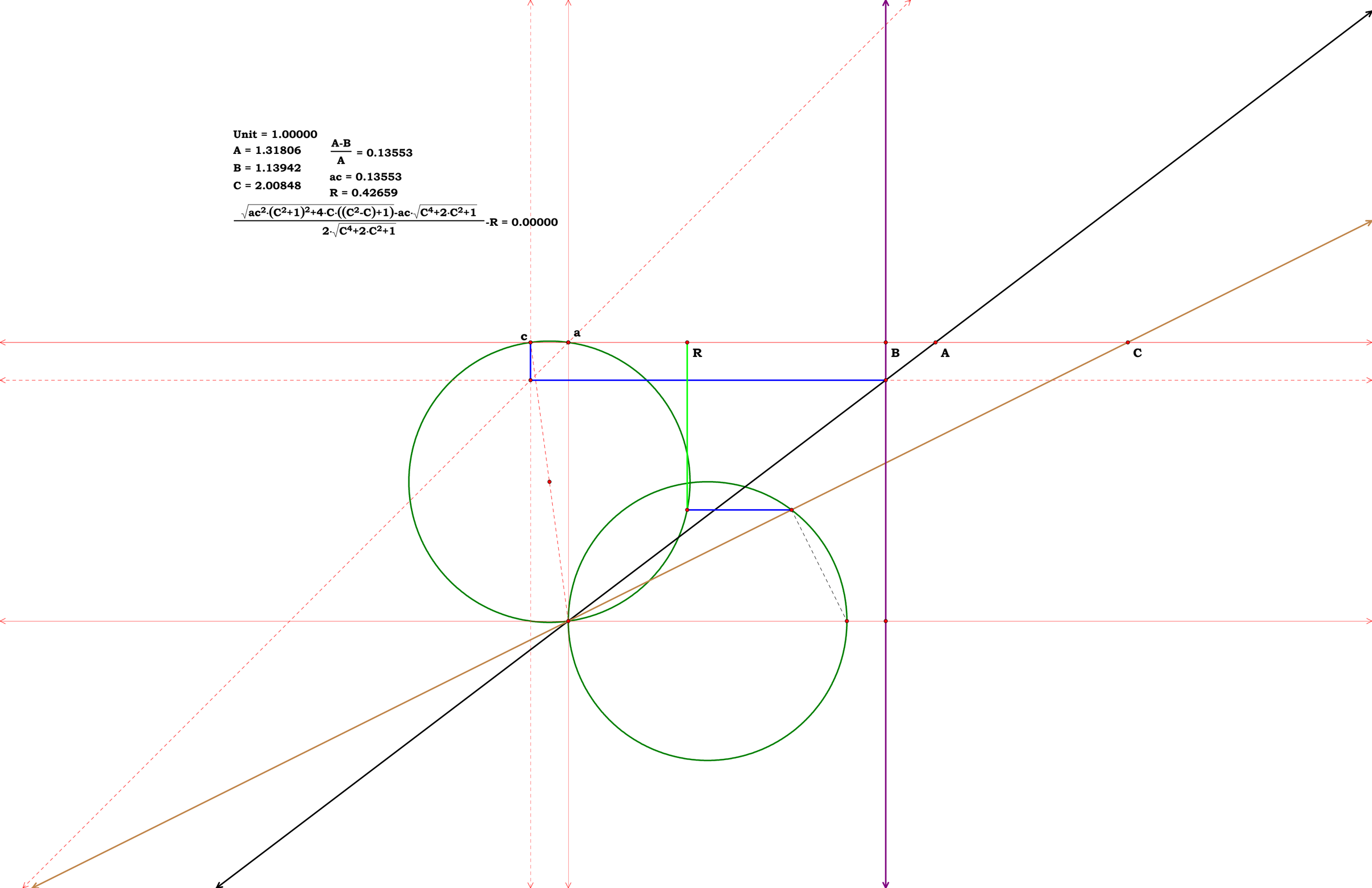
C = 2.00848

$\frac{A-B}{A} = 0.13553$

ac = 0.13553

R = 0.42659

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$



Unit = 1.00000

A = 2.31989

B = 1.07183

C = 1.96261

$\frac{B}{A}$ = 0.46202

ac = 0.46202

R = 0.31144

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$

c

a

R

B

C

A

Unit = 1.00000

A = 0.19071

B = 0.44177

C = 1.64879

$\frac{A}{A+B} = 0.30153$

ac = 0.30153

R = 0.36840

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$

c

a

A

R

B

C

Unit = 1.00000

A = 0.71214

B = 0.41521

C = 1.94330

$\frac{B}{A+B} = 0.36831$

ac = 0.36831

R = 0.34048

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$

c

a

R

B

A

C

Unit = 1.00000

A = 0.19071

B = 0.48764

C = 1.84915

$\frac{A}{B}$ = 0.39109

ac = 0.39109

R = 0.33510

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}$-R = 0.00000

c

a

A

R

B

C

Unit = 1.00000

A = 0.27520

B = 0.42487

C = 2.15332

$\frac{B-A}{B} = 0.35227$

ac = 0.35227

R = 0.34068

$\frac{\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{C^4+2\cdot C^2+1}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$

c

a

A

R

B

C

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 0.64455

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.53389

$$\frac{4\cdot C^4}{2\cdot(C^2+1)\cdot((C^2-2\cdot ac\cdot C^2)+1)-2\cdot\sqrt{(C^2+1)^2}\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}} - R = 0.00000$$

c

a

B

A

R

C

Unit = 1.00000

A = 0.45867

B = 0.23658

C = 0.62524

$\frac{B}{A}$ = 0.51579

ac = 0.51579

R = 0.40791

$$\frac{4\cdot C^4}{2\cdot(C^2+1)\cdot((C^2-2\cdot ac\cdot C^2)+1)-2\cdot\sqrt{(C^2+1)^2}\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}}-R = 0.00000$$

c

a

B

R

A

C

Unit = 1.00000

A = 0.19071

B = 0.39107

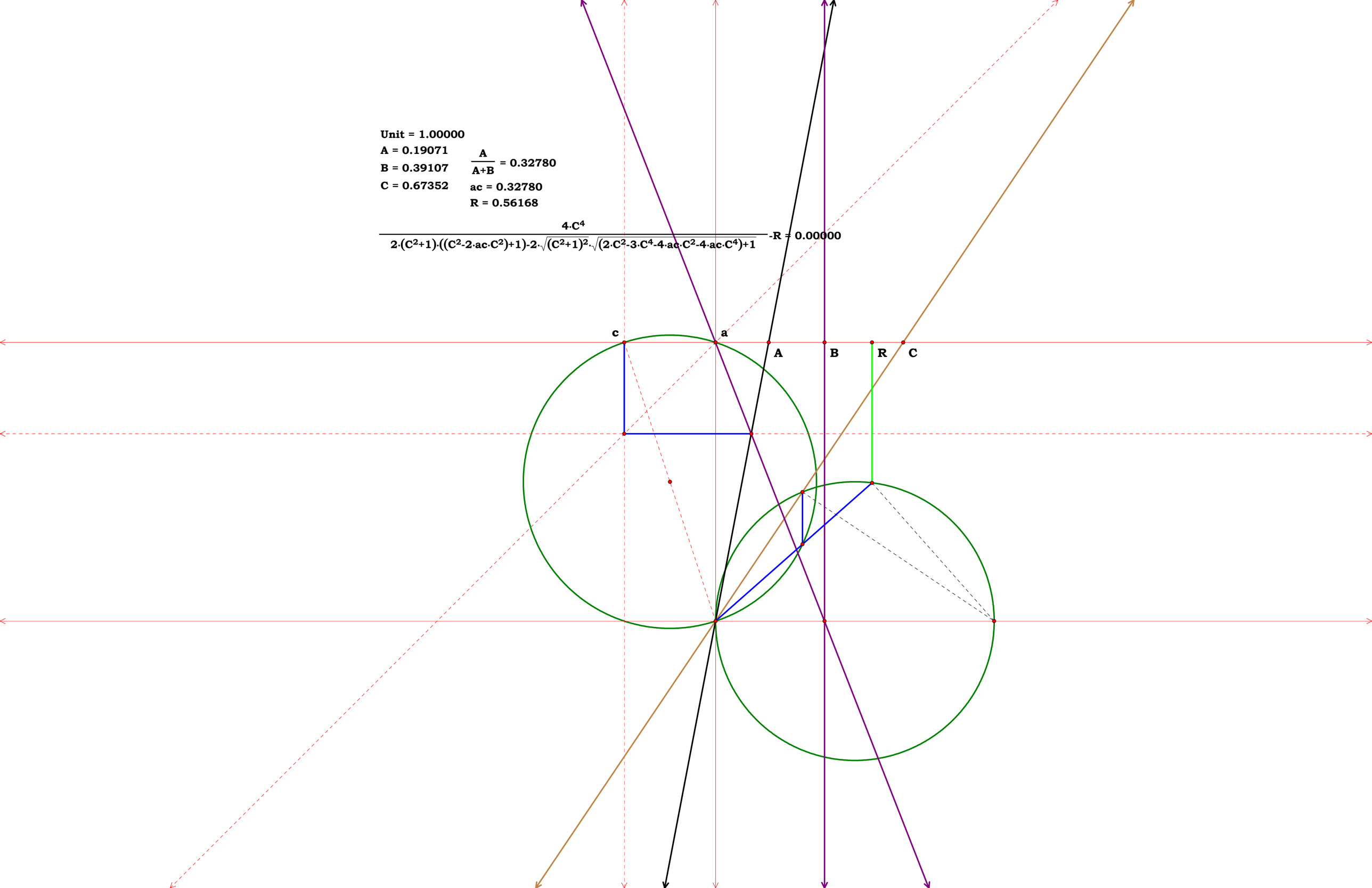
C = 0.67352

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.56168

$\frac{4 \cdot C^4}{2 \cdot (C^2+1) \cdot ((C^2-2 \cdot ac \cdot C^2)+1) - 2 \cdot \sqrt{(C^2+1)^2} \cdot \sqrt{(2 \cdot C^2-3 \cdot C^4-4 \cdot ac \cdot C^2-4 \cdot ac \cdot C^4)+1}} - R = 0.00000$



Unit = 1.00000

A = 1.53291

B = 0.36211

C = 0.58902

$\frac{B}{A+B} = 0.19108$

ac = 0.19108

R = 0.78864

$$\frac{4\cdot C^4}{2\cdot(C^2+1)\cdot((C^2-2\cdot ac\cdot C^2)+1)-2\cdot\sqrt{(C^2+1)^2}\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}} - R = 0.00000$$

c

a

B

C

R

A

Unit = 1.00000

A = 0.19554

B = 0.74352

C = 0.41521

$\frac{A}{B}$ = 0.26299

ac = 0.26299

R = 0.83886

$$\frac{4\cdot C^4}{2\cdot(C^2+1)\cdot((C^2-2\cdot ac\cdot C^2)+1)-2\cdot\sqrt{(C^2+1)^2}\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}} - R = 0.00000$$

c

a

A

C

B

R

Unit = 1.00000
A = 0.22209
B = 0.39107
C = 0.60592

$\frac{B-A}{B} = 0.43210$

ac = 0.43210
R = 0.53311

$$\frac{4\cdot C^4}{2\cdot(C^2+1)\cdot((C^2-2\cdot ac\cdot C^2)+1)-2\cdot\sqrt{(C^2+1)^2\cdot\sqrt{(2\cdot C^2-3\cdot C^4-4\cdot ac\cdot C^2-4\cdot ac\cdot C^4)+1}}} - R = 0.00000$$

c
a
A
B
R
C

Unit = 1.00000

A = 0.31382

B = 0.19312

C = 1.87571

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.81090

$\frac{(C^2+1)\cdot(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2})}{2\cdot C\cdot\sqrt{(C^2+1)^2}}-R = 0.00000$

c

a

B

A

R

C

Unit = 1.00000

A = 0.55764

B = 0.23175

C = 2.42128

$\frac{B}{A}$ = 0.41558

ac = 0.41558

R = 0.88792

$$\frac{(C^2+1)\cdot\left(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2}\right)}{2\cdot C\cdot\sqrt{(C^2+1)^2}}-R = 0.00000$$

c

a

B

A

R

C

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 2.23057

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.92902

$\frac{(C^2+1)\cdot\left(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2}\right)}{2\cdot C\cdot\sqrt{(C^2+1)^2}} - R = 0.00000$

c

a

A

B

R

C

Unit = 1.00000

A = 1.18529

B = 0.44660

C = 2.09780

$\frac{B}{A+B} = 0.27367$

ac = 0.27367

R = 0.95102

$\frac{(C^2+1)\cdot(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2})}{2\cdot C\cdot\sqrt{(C^2+1)^2}}-R = 0.00000$

c

a

B

R

A

C

Unit = 1.00000

A = 0.15208

B = 0.58902

C = 1.91433

$\frac{A}{B}$ = 0.25820

ac = 0.25820

R = 0.92464

$$\frac{(C^2+1)\cdot\left(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2}\right)}{2\cdot C\cdot\sqrt{(C^2+1)^2}}-R = 0.00000$$

c

a

A

B

R

C

Unit = 1.00000

A = 0.21968

B = 0.31865

C = 1.79846

$\frac{B-A}{B} = 0.31061$

ac = 0.31061

R = 0.85426

$\frac{(C^2+1)\cdot(\sqrt{ac^2\cdot(C^2+1)^2+4\cdot C\cdot((C^2-C)+1)}-ac\cdot\sqrt{(C^2+1)^2})}{2\cdot C\cdot\sqrt{(C^2+1)^2}} - R = 0.00000$

c

a

A

B

R

C

Unit = 1.00000

A = 0.23416

B = 0.19312

C = 0.75559

$\frac{A-B}{A} = 0.17526$

ac = 0.17526

R = 1.36045

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot (\sqrt{(C^2+1)^2} - \sqrt{(2 \cdot C^2 - 4 \cdot ac \cdot C^2 \cdot (C^2+1) - 3 \cdot C^4) + 1})} - R = 0.00000$

c

a

B A

C

R

Unit = 1.00000

A = 1.54740

B = 0.23175

C = 0.81112

$\frac{B}{A}$ = 0.14977

ac = 0.14977

R = 1.24757

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot (\sqrt{(C^2+1)^2} - \sqrt{(2 \cdot C^2 - 4 \cdot ac \cdot C^2 \cdot (C^2+1) - 3 \cdot C^4) + 1})} - R = 0.00000$

c

a

B

C

R

A

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.70007

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 1.04219

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot (\sqrt{(C^2+1)^2} - \sqrt{(2 \cdot C^2 - 4 \cdot ac \cdot C^2 \cdot (C^2+1) - 3 \cdot C^4) + 1})} - R = 0.00000$

c

a

A

B

C

R

Unit = 1.00000

A = 1.96985

B = 0.39107

C = 0.74111

$\frac{B}{A+B} = 0.16564$

ac = 0.16564

R = 1.45358

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2} - \sqrt{(2 \cdot C^2 - 4 \cdot ac \cdot C^2 \cdot (C^2+1) - 3 \cdot C^4) + 1}\right)} - R = 0.00000$

c

a

B

C

R

A

Unit = 1.00000

A = 0.14484

B = 0.80629

C = 0.66145

$\frac{A}{B}$ = 0.17964

ac = 0.17964

R = 1.69519

$$\frac{2\cdot C^2\cdot\sqrt{(C^2+1)^2}}{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}-\sqrt{(2\cdot C^2-4\cdot ac\cdot C^2\cdot(C^2+1)-3\cdot C^4)+1}\right)}-R = 0.00000$$

c

a

A

C

B

R

Unit = 1.00000

A = 0.30658

B = 0.39107

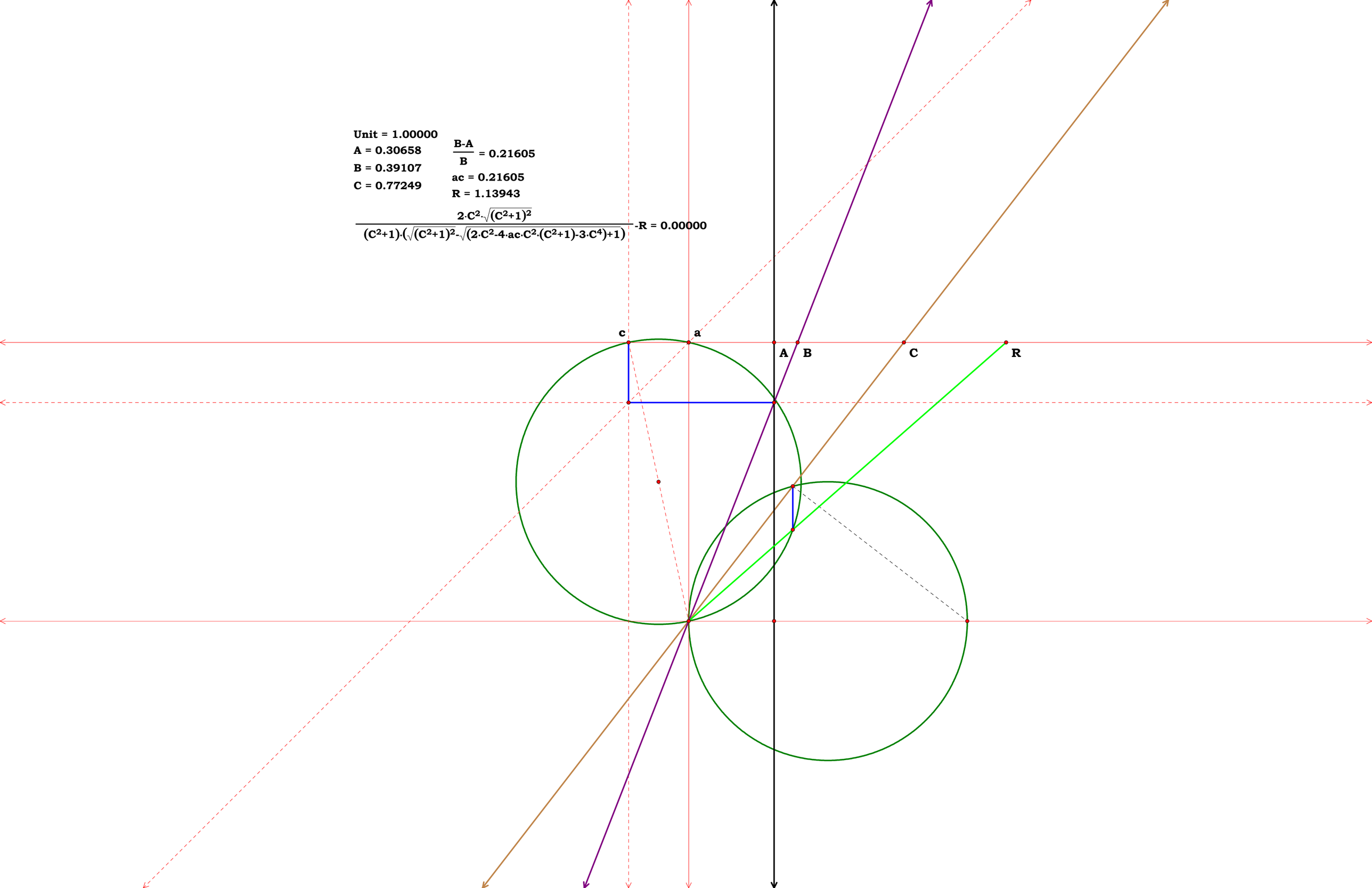
C = 0.77249

$\frac{B-A}{B} = 0.21605$

ac = 0.21605

R = 1.13943

$\frac{2 \cdot C^2 \cdot \sqrt{(C^2+1)^2}}{(C^2+1) \cdot \left(\sqrt{(C^2+1)^2} - \sqrt{(2 \cdot C^2 - 4 \cdot ac \cdot C^2 \cdot (C^2+1) - 3 \cdot C^4) + 1}\right)} - R = 0.00000$



Unit = 1.00000

A = 0.31382

B = 0.19312

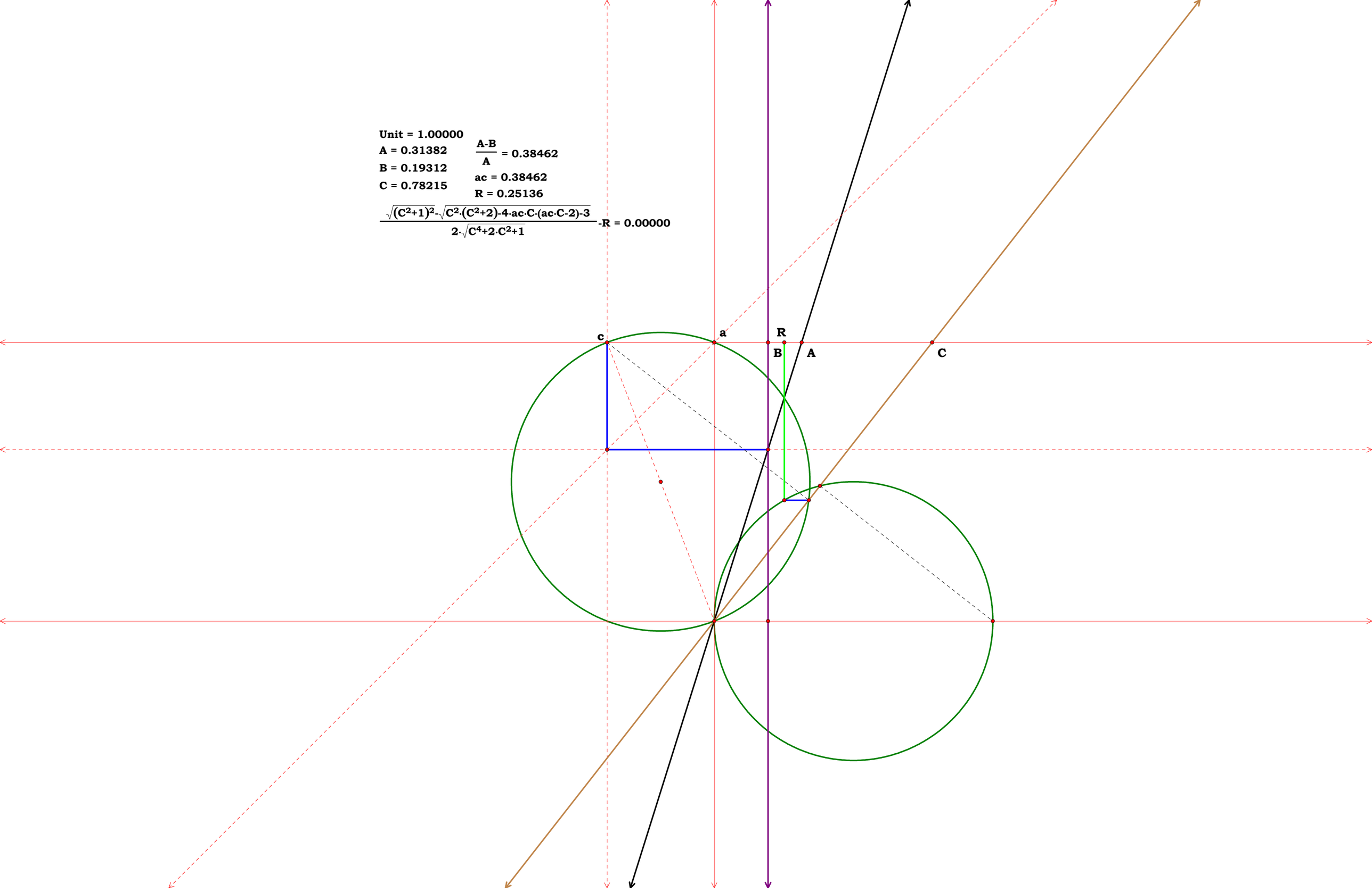
C = 0.78215

$\frac{A-B}{A}$ = 0.38462

ac = 0.38462

R = 0.25136

$\frac{\sqrt{(C^2+1)^2}-\sqrt{C^2\cdot(C^2+2)-4\cdot ac\cdot C\cdot(ac\cdot C-2)-3}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}$ -R = 0.00000



Unit = 1.00000

A = 1.40497

B = 0.23175

C = 0.88837

$\frac{B}{A}$ = 0.16495

ac = 0.16495

R = 0.35013

$\frac{\sqrt{(C^2+1)^2}-\sqrt{C^2\cdot(C^2+2)-4\cdot ac\cdot C\cdot(ac\cdot C-2)-3}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}$ -R = 0.00000

c

a

B

R

C

A

Unit = 1.00000

A = 0.13760

B = 1.42428

C = 0.96079

$\frac{A}{A+B} = 0.08810$

ac = 0.08810

R = 0.34688

$\frac{\sqrt{(C^2+1)^2}-\sqrt{C^2\cdot(C^2+2)-4\cdot ac\cdot C\cdot(ac\cdot C-2)-3}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$

c

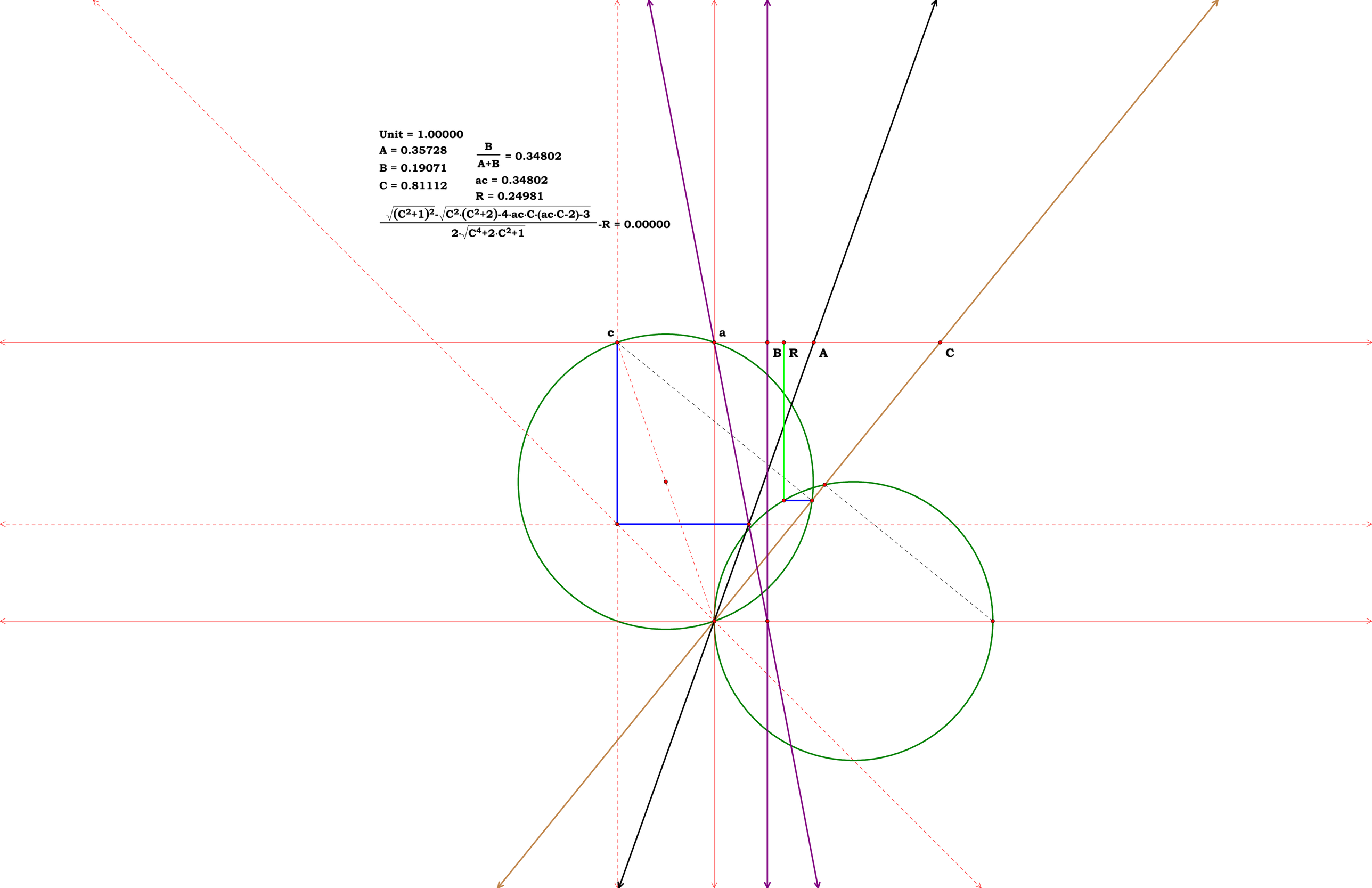
a

A

R

C

B


Unit = 1.00000
A = 0.35728
B = 0.19071
C = 0.81112
B / (A+B) = 0.34802
ac = 0.34802
R = 0.24981
(√((C²+1)²) - √(C²·(C²+2) - 4·ac·C·(ac·C-2)) - 3) / (2·√(C⁴+2·C²+1)) - R = 0.00000
c
a
B
R
A
C

Unit = 1.00000

A = 0.17140

B = 1.44842

C = 0.94147

$\frac{A}{B}$ = 0.11833

ac = 0.11833

R = 0.33236

$\frac{\sqrt{(C^2+1)^2}-\sqrt{C^2\cdot(C^2+2)-4\cdot ac\cdot C\cdot(ac\cdot C-2)-3}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}$-R = 0.00000

c

a

A

R

C

B

Unit = 1.00000

A = 0.19071

B = 0.39107

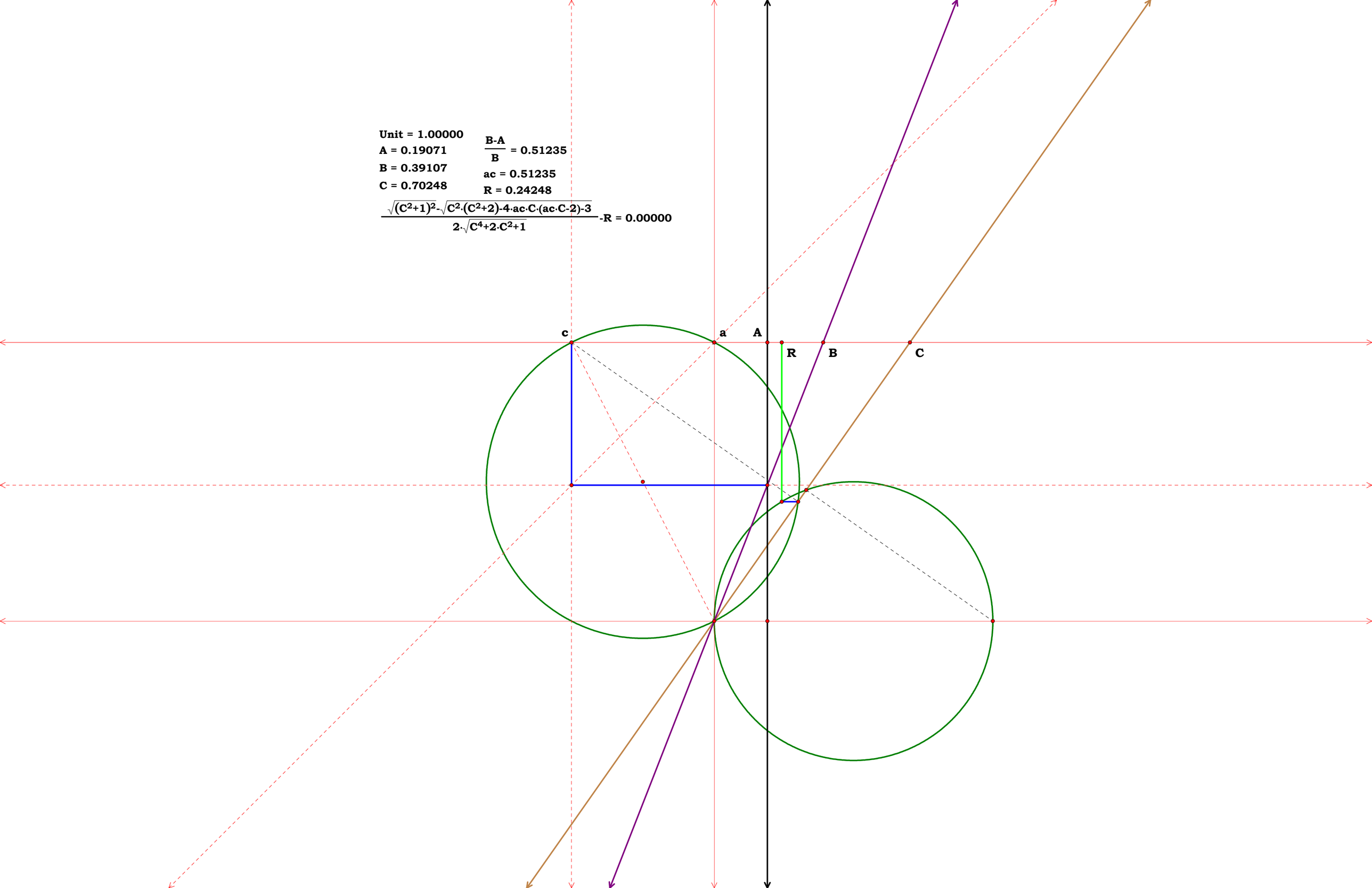
C = 0.70248

$\frac{B-A}{B} = 0.51235$

ac = 0.51235

R = 0.24248

$\frac{\sqrt{(C^2+1)^2}-\sqrt{C^2\cdot(C^2+2)-4\cdot ac\cdot C\cdot(ac\cdot C-2)-3}}{2\cdot\sqrt{C^4+2\cdot C^2+1}}-R = 0.00000$



Unit = 1.00000

A = 0.31382

B = 0.19312

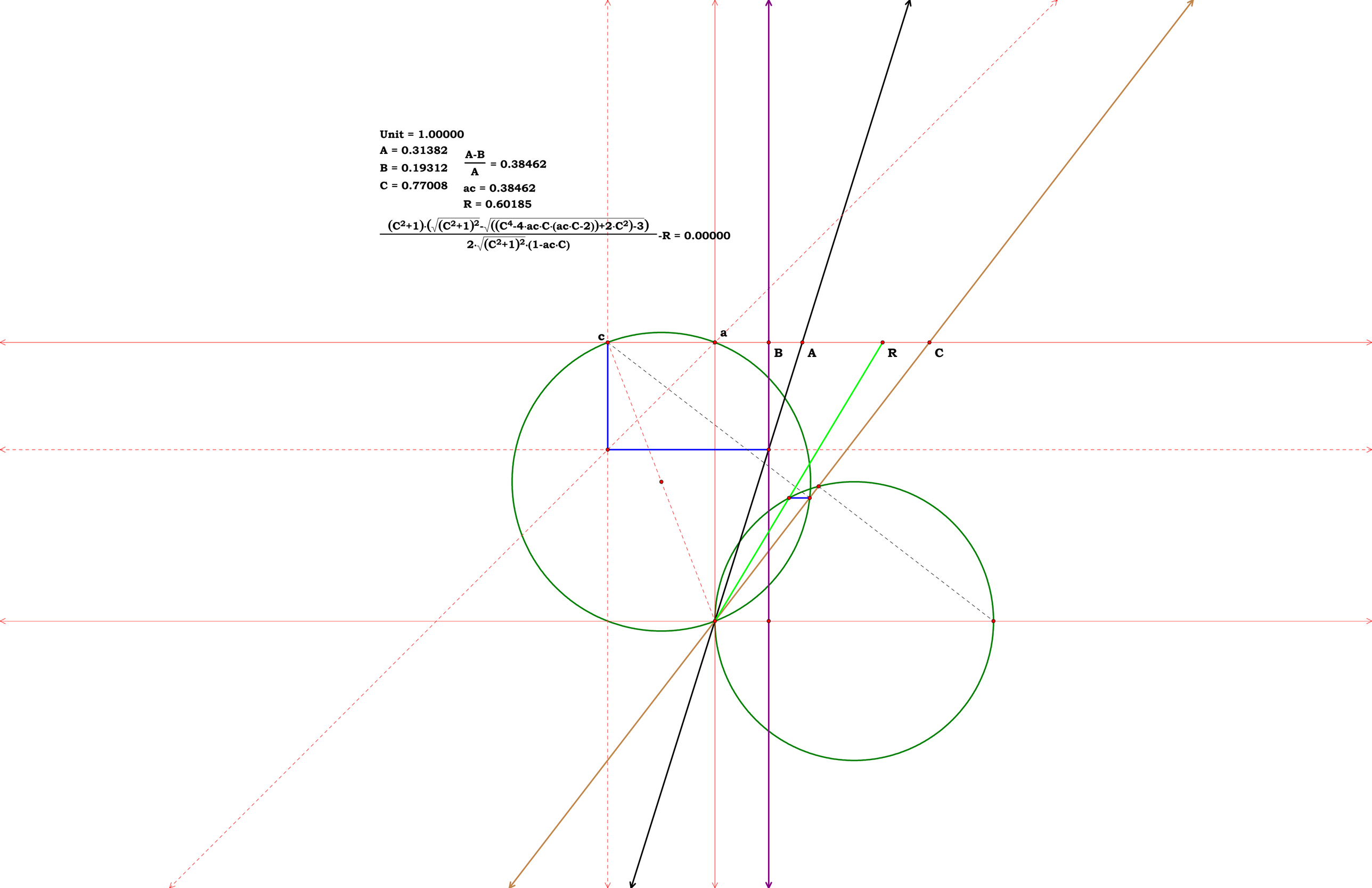
C = 0.77008

$\frac{A-B}{A} = 0.38462$

ac = 0.38462

R = 0.60185

$$\frac{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}-\sqrt{((C^4-4\cdot ac\cdot C\cdot(ac\cdot C-2))+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$$



Unit = 1.00000
A = 1.67293
B = 0.23175
C = 0.93423

$\frac{B}{A} = 0.13853$

ac = 0.13853

R = 0.67948

$$\frac{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}-\sqrt{((C^4-4\cdot ac\cdot C\cdot(ac\cdot C-2))+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)} - R = 0.00000$$

c a B R C A

Unit = 1.00000

A = 0.20278

B = 1.53291

C = 0.96561

$\frac{A}{A+B} = 0.11683$

ac = 0.11683

R = 0.65772

$\frac{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}-\sqrt{((C^4-4\cdot ac\cdot C\cdot(ac\cdot C-2))+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2\cdot(1-ac\cdot C)}} - R = 0.00000$

c

a

A

R

C

B

Unit = 1.00000

A = 1.42670

B = 0.28968

C = 0.98010

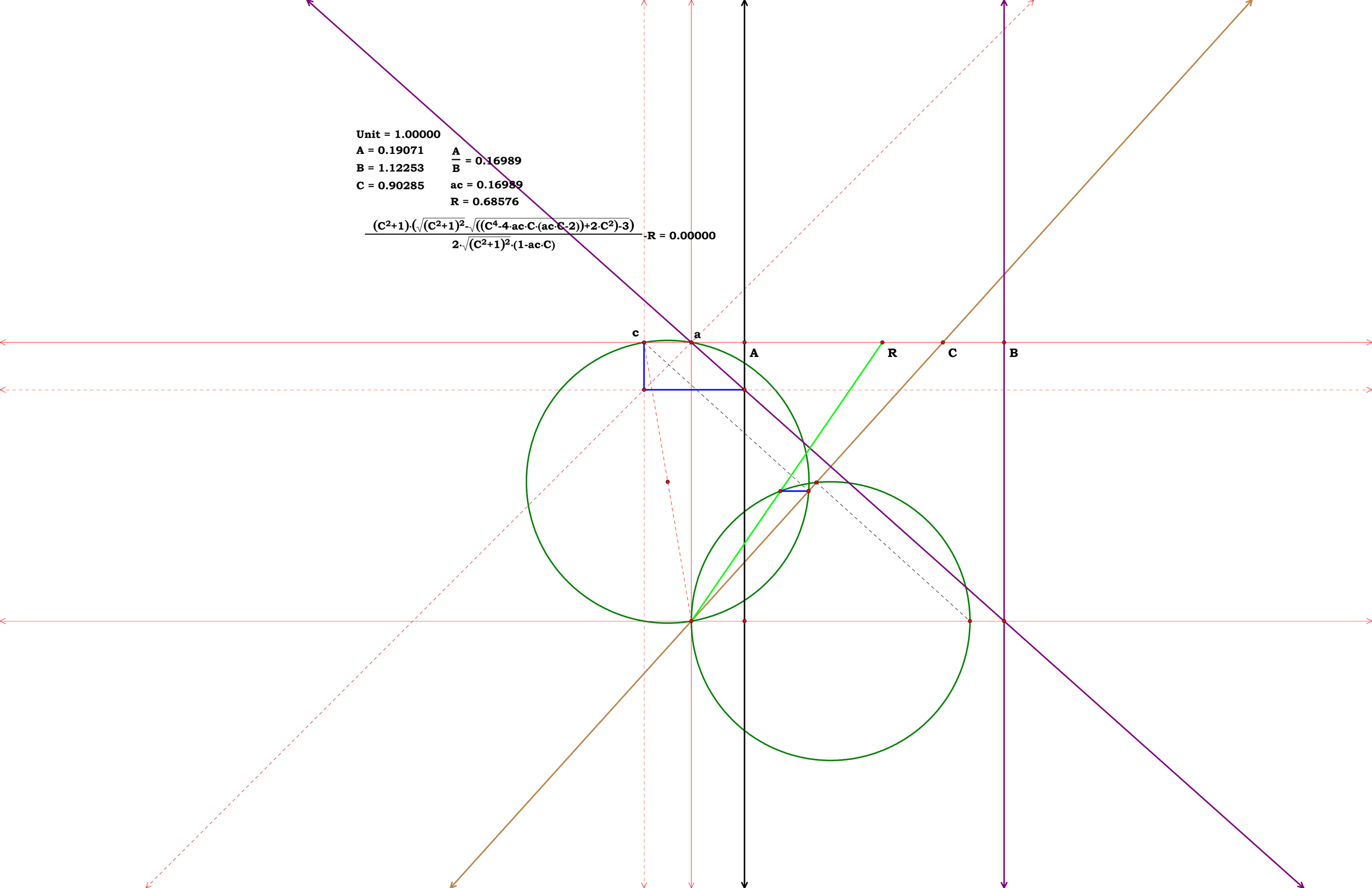
$\frac{B}{A+B} = 0.16878$

ac = 0.16878

R = 0.55842

$\frac{(C^2+1)\cdot(\sqrt{(C^2+1)^2}-\sqrt{((C^4-4\cdot ac\cdot C\cdot(ac\cdot C-2))+2\cdot C^2)-3})}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$

c a B R C A


Unit = 1.00000
A = 0.19071
B = 1.12253
C = 0.90285
A/B = 0.16989
ac = 0.16989
R = 0.68576
((C²+1)·(√((C²+1)²)-√(((C⁴-4·ac·C·(ac·C-2))+2·C²)-3)))/(2·√((C²+1)²)·(1-ac·C))-R = 0.00000
c
a
A
R
C
B

Unit = 1.00000

A = 0.29693

B = 0.33555

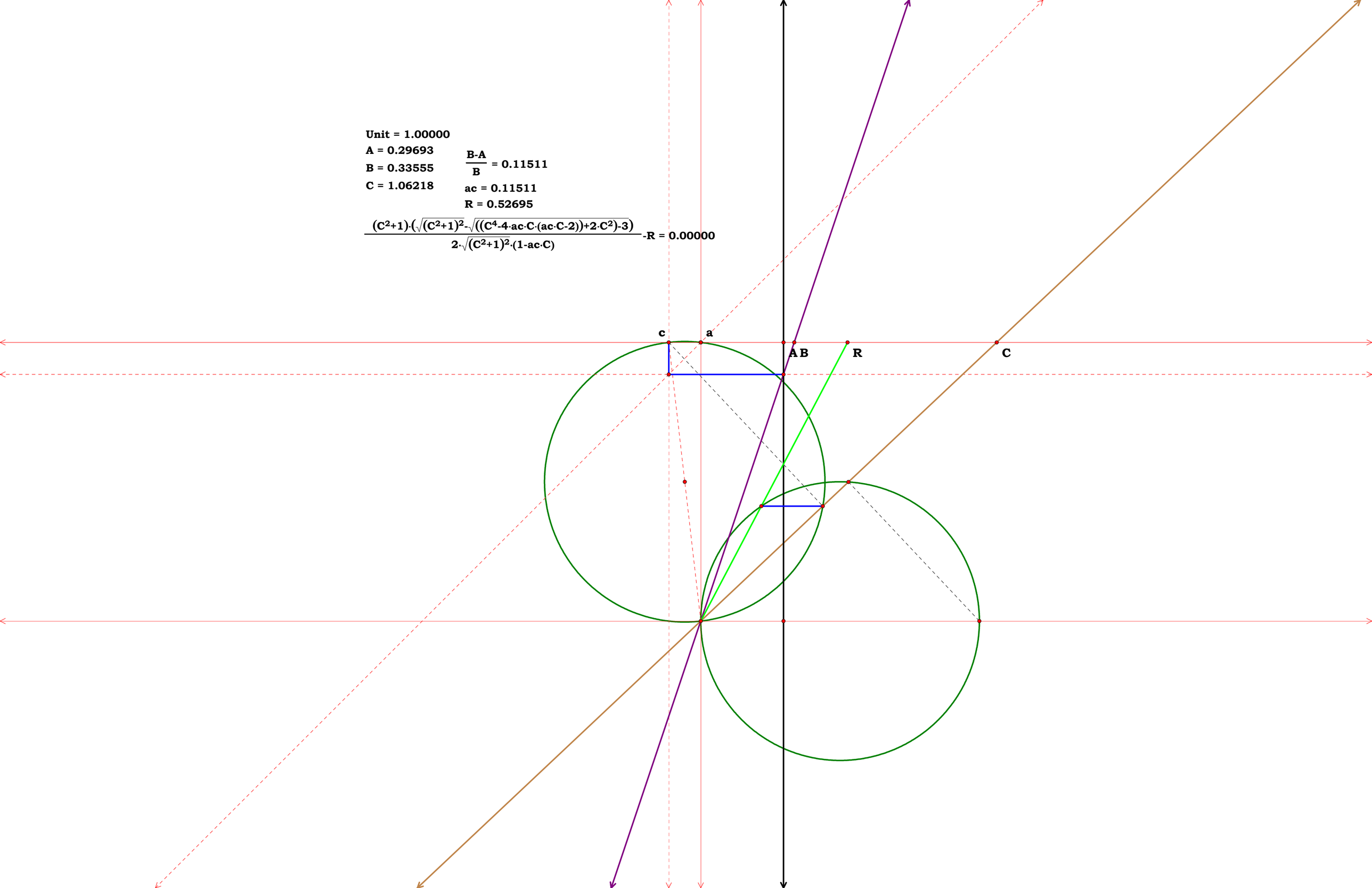
C = 1.06218

$\frac{B-A}{B} = 0.11511$

ac = 0.11511

R = 0.52695

$\frac{(C^2+1)\cdot(\sqrt{(C^2+1)^2}-\sqrt{((C^4-4\cdot ac\cdot C\cdot(ac\cdot C-2))+2\cdot C^2)-3})}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)} - R = 0.00000$



Unit = 1.00000

A = 0.30175

B = 0.23175

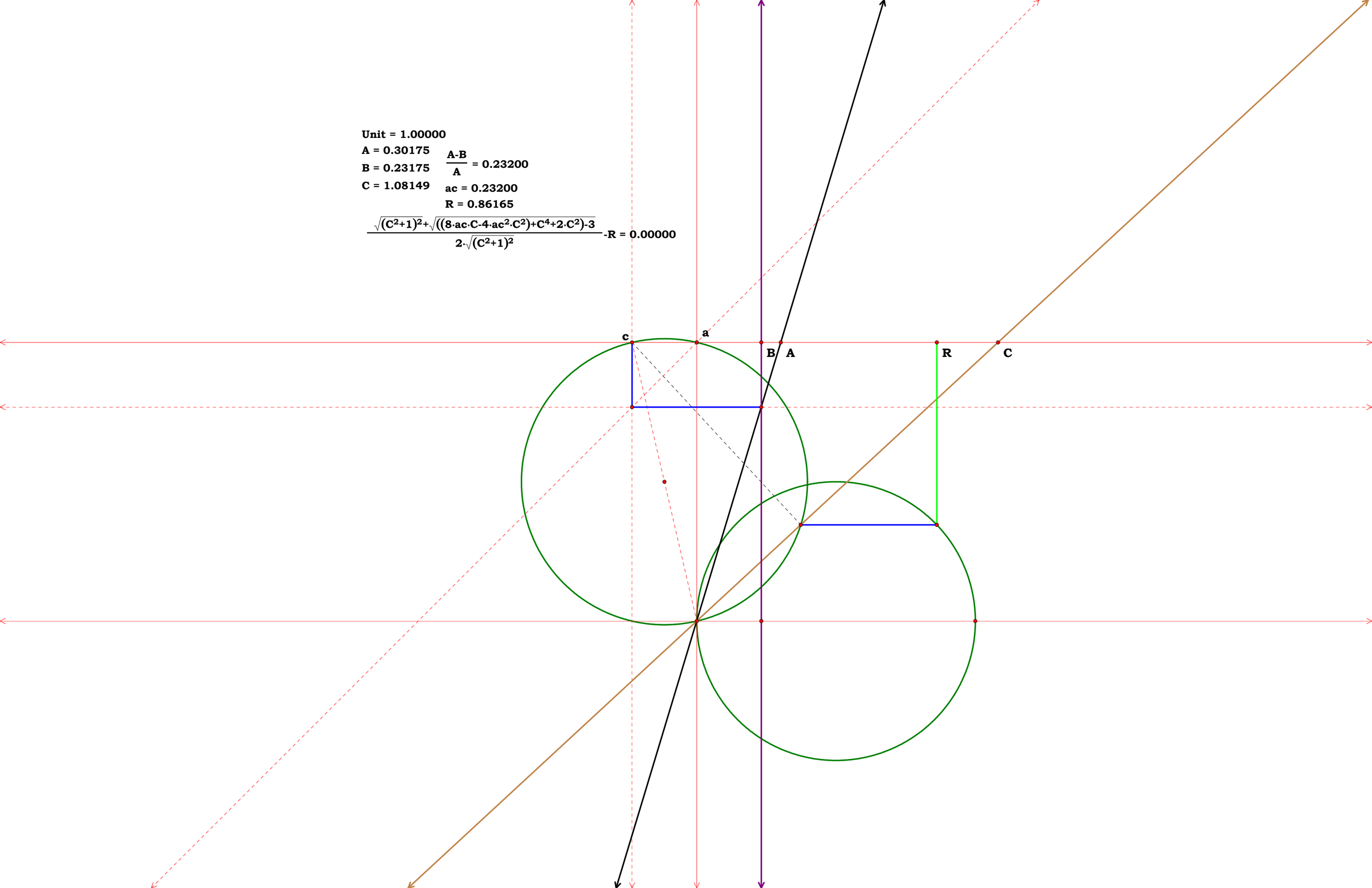
C = 1.08149

$\frac{A-B}{A} = 0.23200$

ac = 0.23200

R = 0.86165

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}} - R = 0.00000$



Unit = 1.00000

A = 2.05193

B = 0.23175

C = 1.02355

$\frac{B}{A}$ = 0.11294

ac = 0.11294

R = 0.75190

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}}$ -R = 0.00000

c

a

B

R

C

A

Unit = 1.00000

A = 0.19071

B = 0.39107

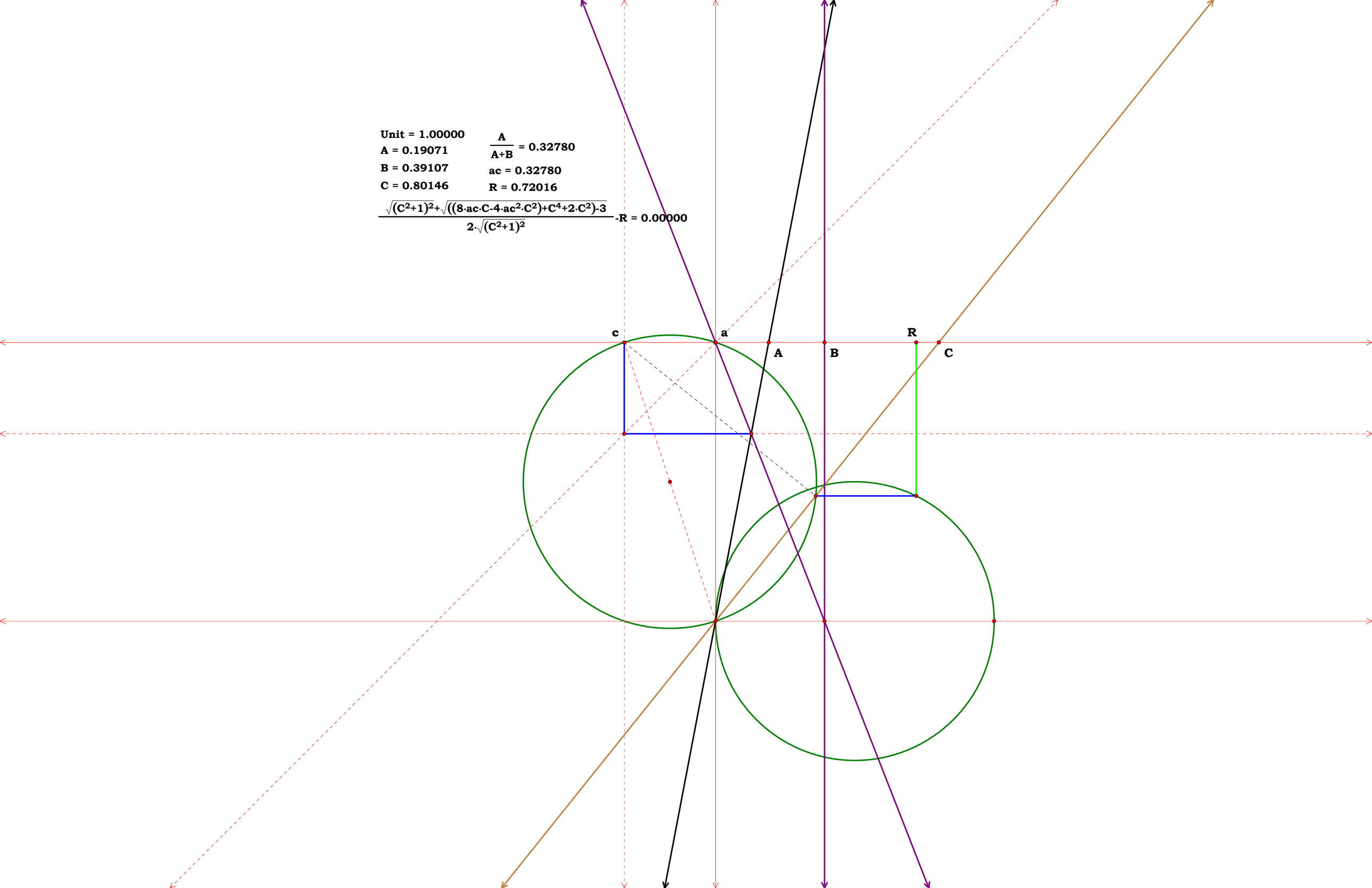
C = 0.80146

$\frac{A}{A+B} = 0.32780$

ac = 0.32780

R = 0.72016

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}}-R = 0.00000$



Unit = 1.00000

A = 1.79121

B = 0.39107

C = 0.89561

$\frac{B}{A+B} = 0.17920$

ac = 0.17920

R = 0.68163

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}} - R = 0.00000$

c

a

B

R

C

A

Unit = 1.00000

A = 0.15691

B = 1.09114

C = 0.95837

$\frac{A}{B}$ = 0.14381

ac = 0.14381

R = 0.71916

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}}$ -R = 0.00000

c

a

A

R

C

B

Unit = 1.00000

A = 0.23658

B = 0.39107

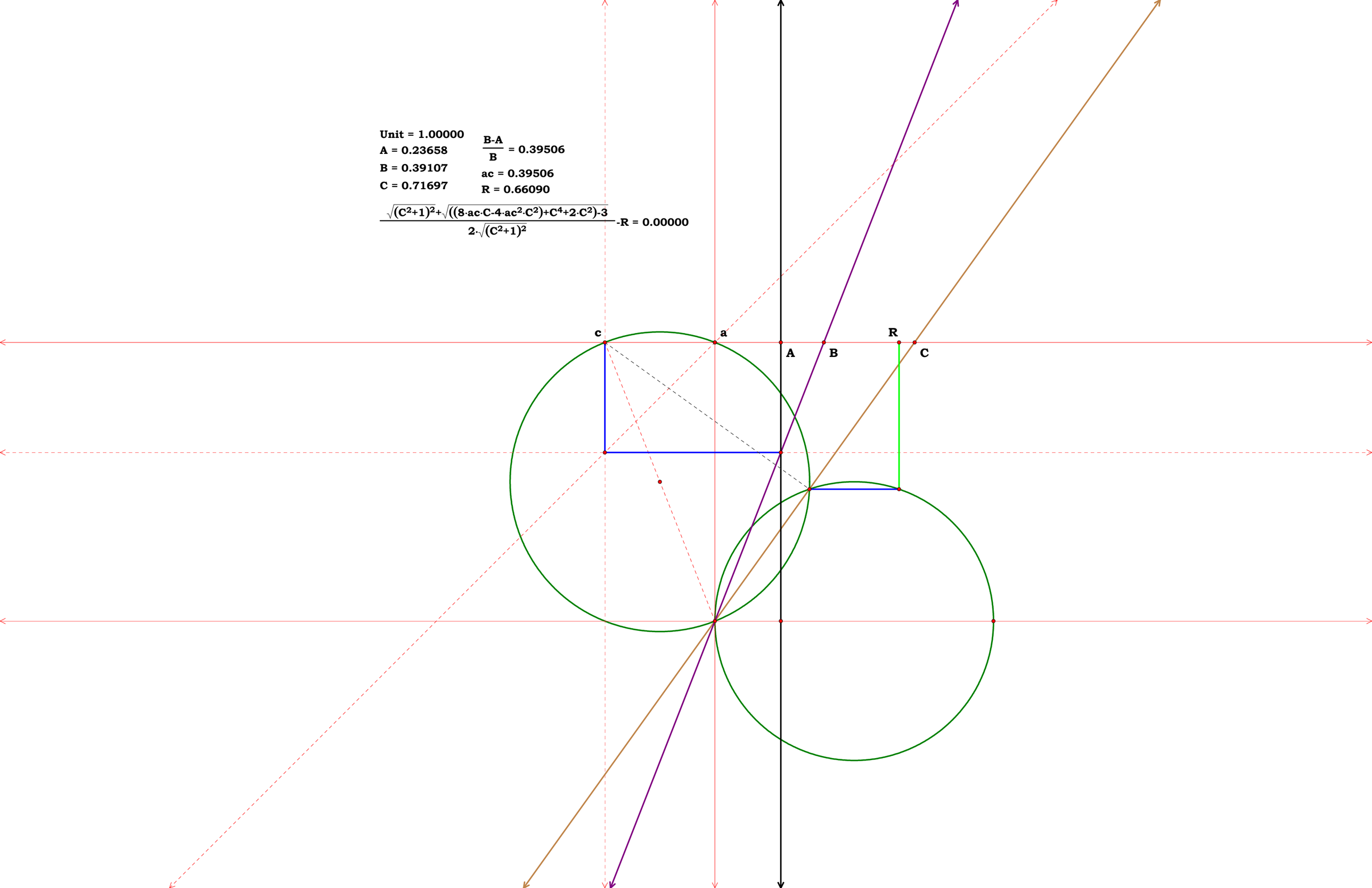
C = 0.71697

$\frac{B-A}{B} = 0.39506$

ac = 0.39506

R = 0.66090

$\frac{\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}}{2\cdot\sqrt{(C^2+1)^2}} - R = 0.00000$



Unit = 1.00000

A = 0.31382

B = 0.19312

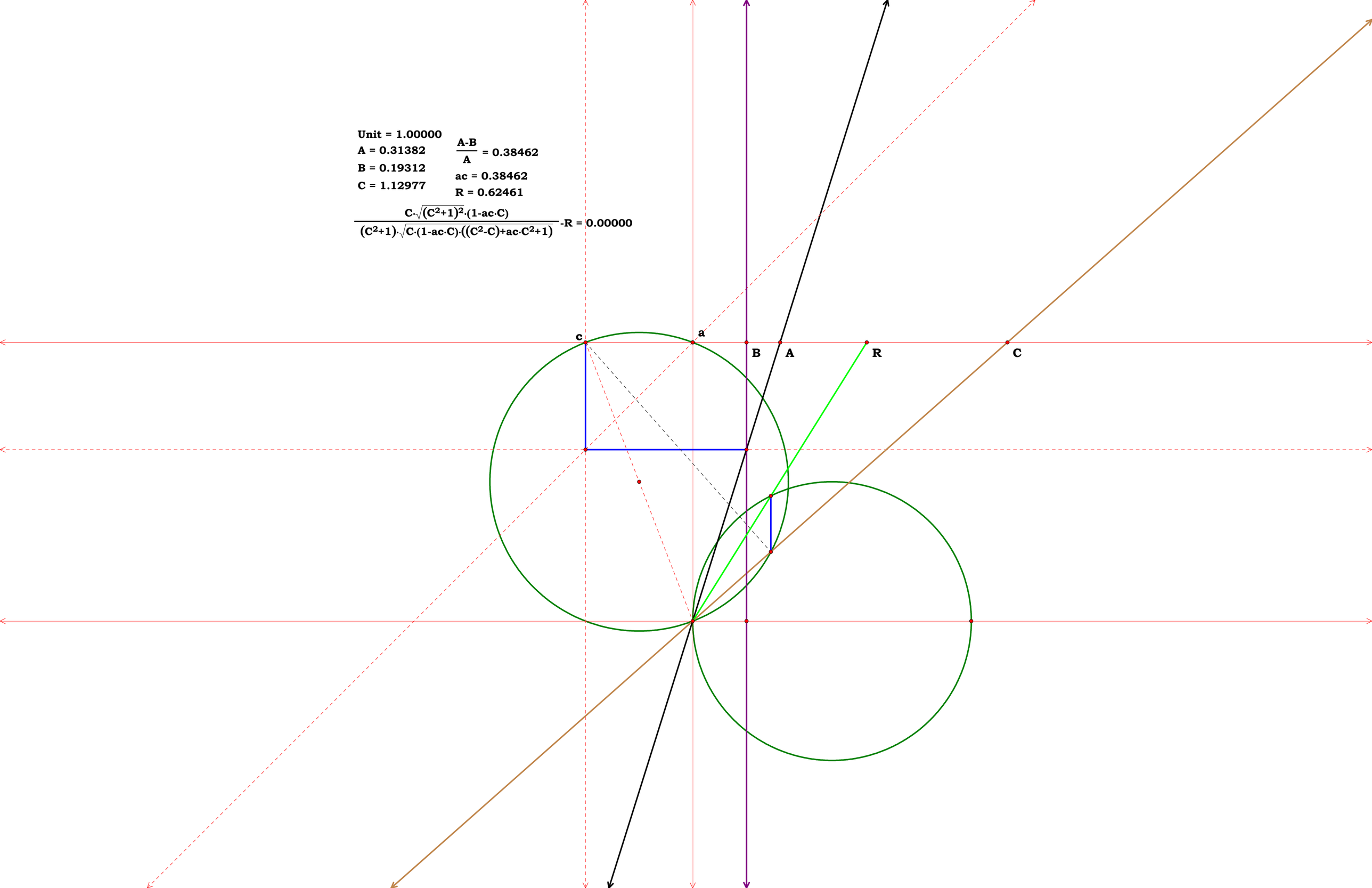
C = 1.12977

$\frac{A-B}{A}$ = 0.38462

ac = 0.38462

R = 0.62461

$\frac{C\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}}$ -R = 0.00000



Unit = 1.00000

A = 1.67534

B = 0.23175

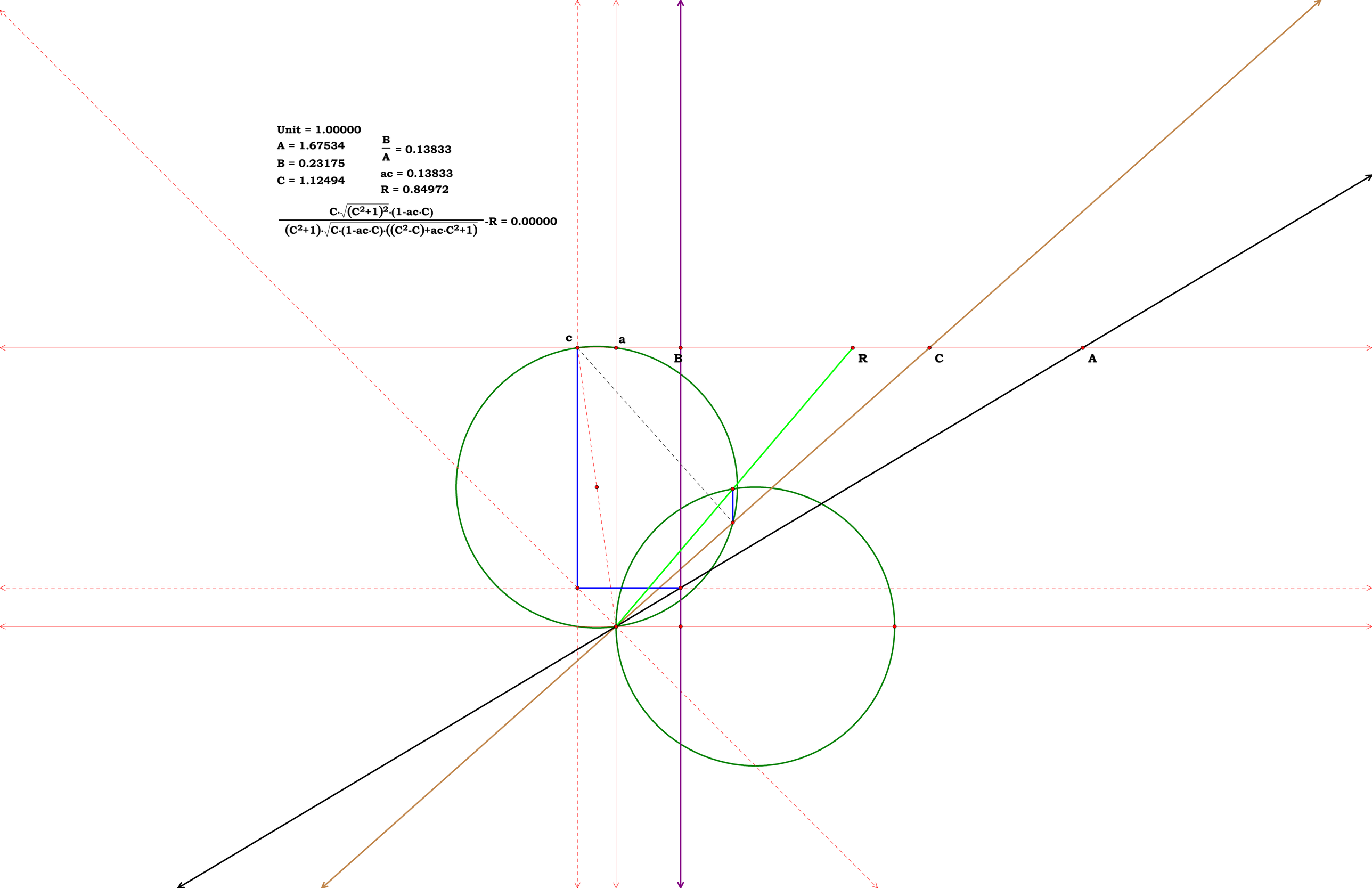
C = 1.12494

$\frac{B}{A}$ = 0.13833

ac = 0.13833

R = 0.84972

$$\frac{C\cdot\sqrt{(C^2+1)^2\cdot(1-ac\cdot C)}}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}}-R = 0.00000$$



Unit = 1.00000

A = 0.19071

B = 1.55222

C = 1.40255

$\frac{A}{A+B} = 0.10942$

ac = 0.10942

R = 0.81675

$\frac{C\cdot\sqrt{(C^2+1)^2\cdot(1-ac\cdot C)}}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}} - R = 0.00000$

c

a

A

R

C

B

Unit = 1.00000

A = 1.80328

B = 0.23416

C = 1.57395

$\frac{B}{A+B} = 0.11493$

ac = 0.11493

R = 0.76760

$\frac{C\cdot\sqrt{(C^2+1)^2\cdot(1-ac\cdot C)}}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}} - R = 0.00000$

c

a

B

R

C

A

Unit = 1.00000

A = 0.18347

B = 1.19736

C = 0.51660

$\frac{A}{B}$ = 0.15323

ac = 0.15323

R = 0.77542

$\frac{C\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}}$ -R = 0.00000

c

a

A

C

R

B

Unit = 1.00000

A = 0.26796

B = 0.30175

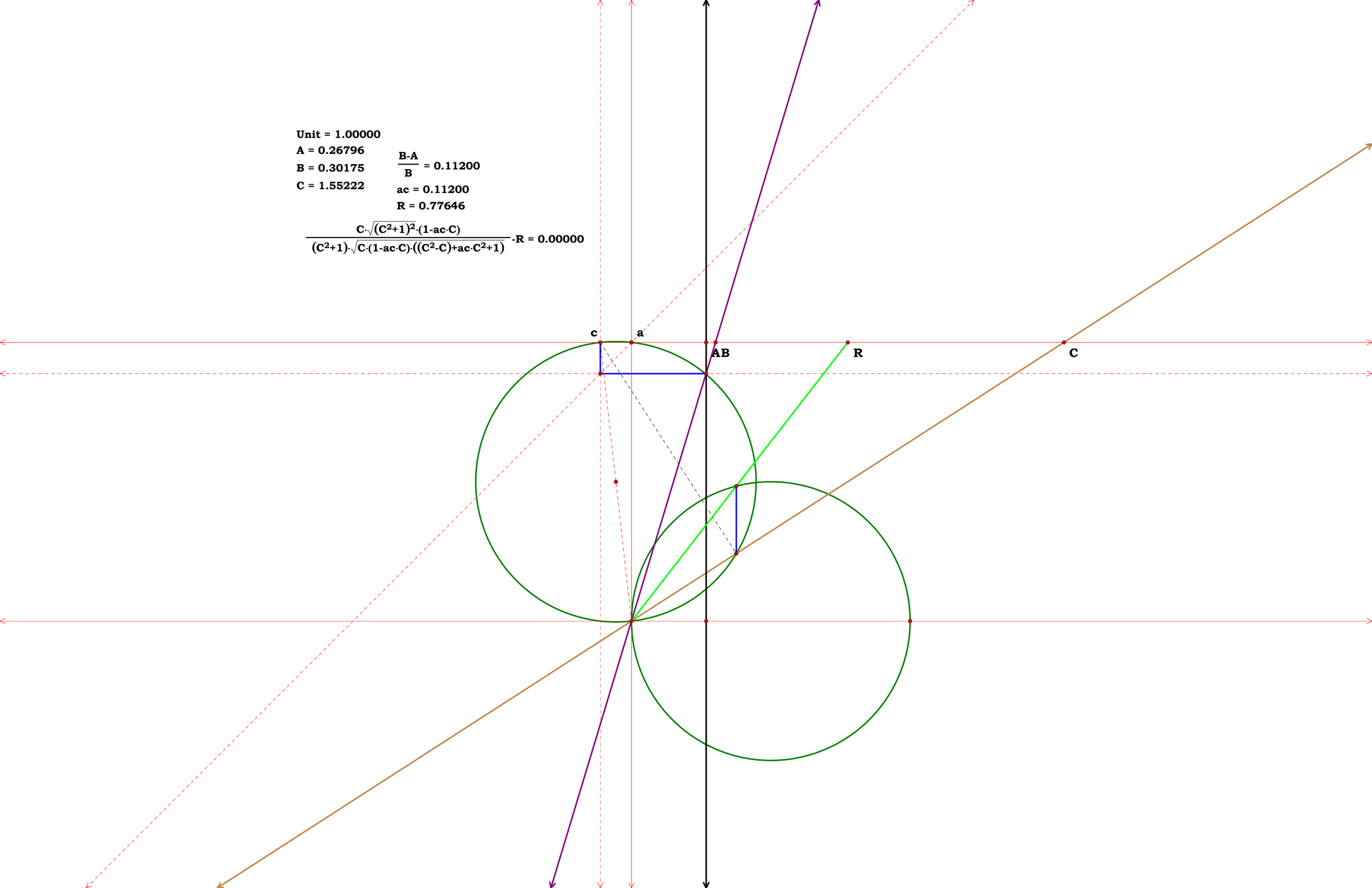
C = 1.55222

$\frac{B-A}{B}$ = 0.11200

ac = 0.11200

R = 0.77646

$\frac{C\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}{(C^2+1)\cdot\sqrt{C\cdot(1-ac\cdot C)\cdot((C^2-C)+ac\cdot C^2+1)}}$ -R = 0.00000



Unit = 1.00000

A = 1.00182

B = 0.91009

C = 1.06942

$\frac{A-B}{A} = 0.09157$

ac = 0.09157

R = 1.82986

$\frac{(C^2+1)\cdot(\sqrt{(C^2+1)^2+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3})}}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)} - R = 0.00000$

c

a

B

A

C

R

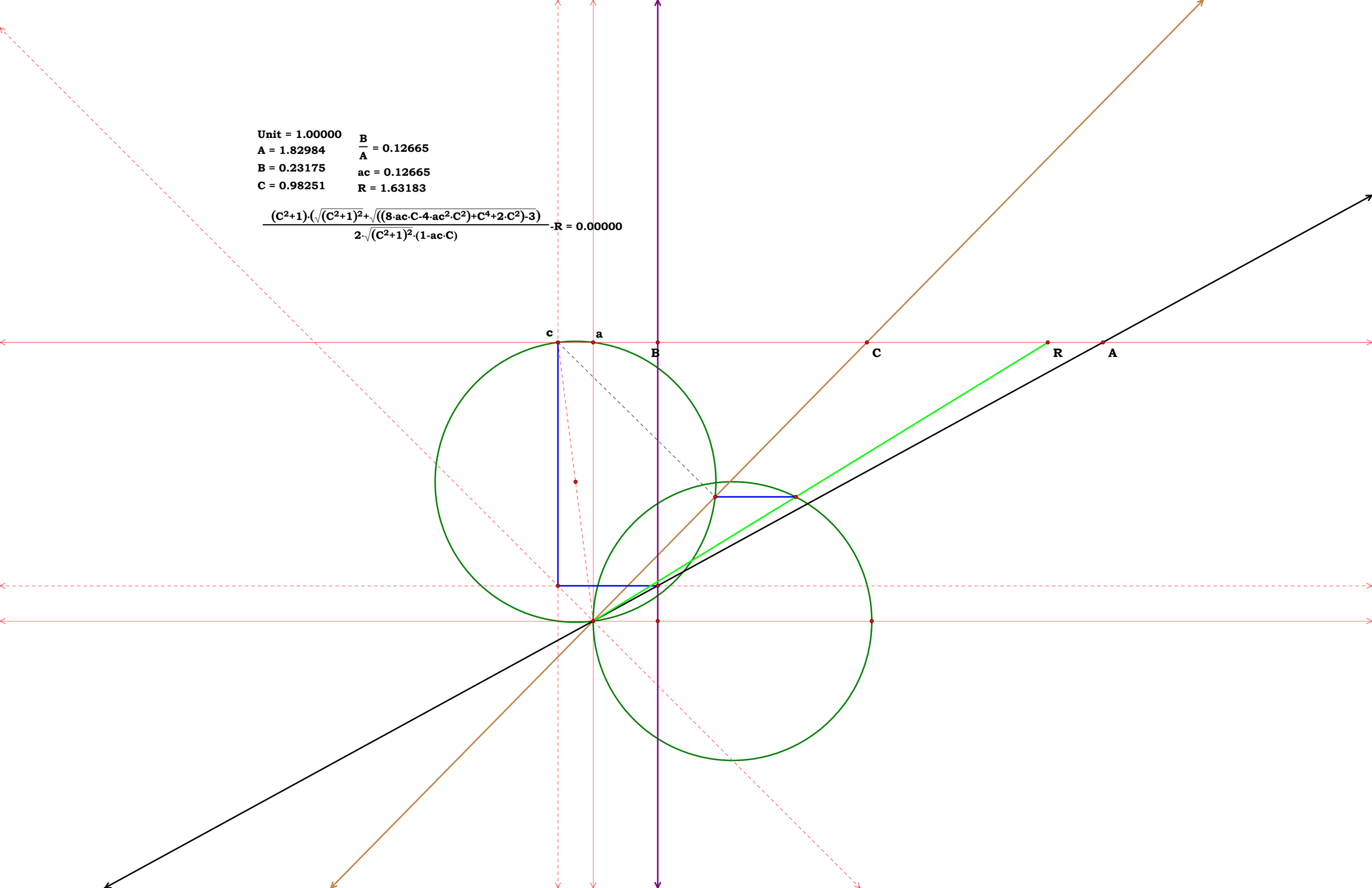
Unit = 1.00000
A = 1.82984
B = 0.23175
C = 0.98251

$\frac{B}{A}$ = 0.12665

ac = 0.12665

R = 1.63183

$$\frac{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$$



Unit = 1.00000

A = 1.76707

B = 2.85339

C = 0.70731

$\frac{A}{A+B}$ = 0.38245

ac = 0.38245

R = 1.26795

$\frac{(C^2+1)\cdot(\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3})}{2\cdot\sqrt{(C^2+1)^2\cdot(1-ac\cdot C)}}$ -R = 0.00000

c

a

C

R

A

B

Unit = 1.00000

A = 1.24564

B = 0.34762

C = 0.86905

$\frac{B}{A+B} = 0.21818$

ac = 0.21818

R = 1.49869

$$\frac{(C^2+1)\cdot\left(\sqrt{C^2+1^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$$

c a B C A R

Unit = 1.00000

A = 0.19071

B = 0.39107

C = 0.67834

$\frac{A}{B} = 0.48765$

ac = 0.48765

R = 1.52708

$$\frac{(C^2+1)\cdot\left(\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3}\right)}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$$

c

a

A

B

C

R

Unit = 1.00000

A = 0.19071

B = 0.42487

C = 0.61317

$\frac{B-A}{B} = 0.55114$

ac = 0.55114

R = 1.32172

$\frac{(C^2+1)\cdot(\sqrt{(C^2+1)^2}+\sqrt{((8\cdot ac\cdot C-4\cdot ac^2\cdot C^2)+C^4+2\cdot C^2)-3})}{2\cdot\sqrt{(C^2+1)^2}\cdot(1-ac\cdot C)}-R = 0.00000$

c

a

A

B

C

R

Unit = 1.00000

A = 0.74352

B = 0.63006

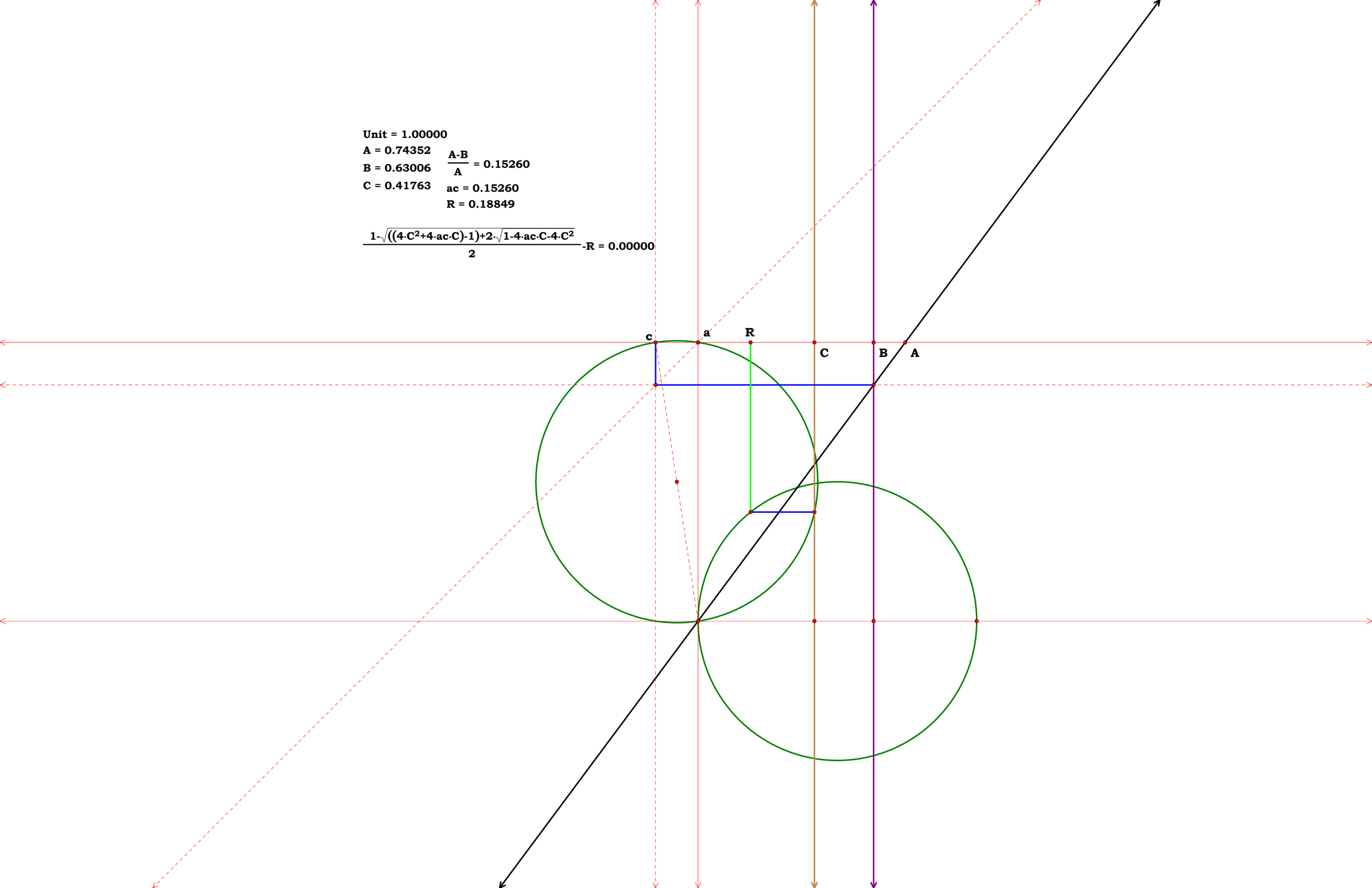
C = 0.41763

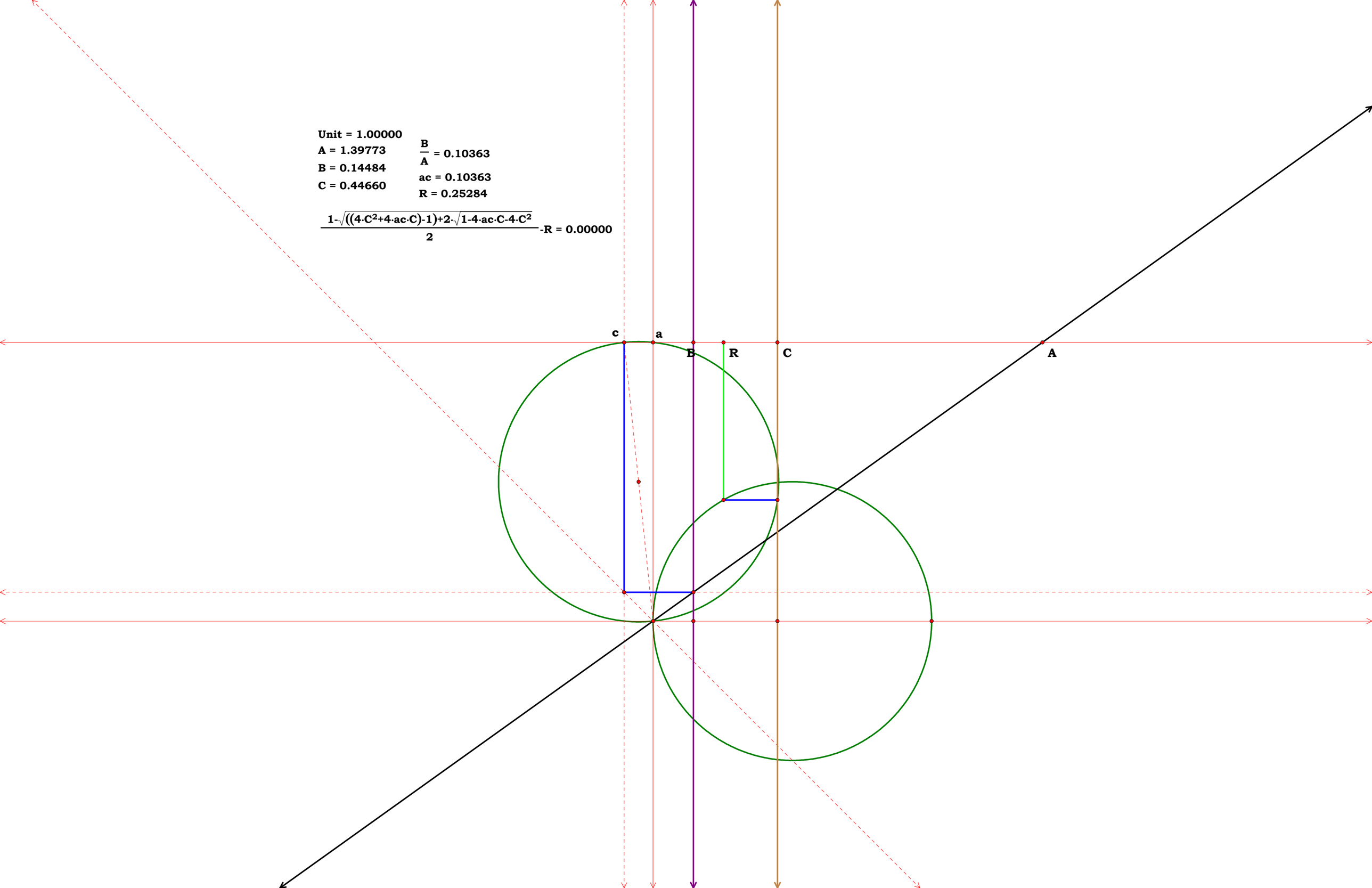
$\frac{A-B}{A}$ = 0.15260

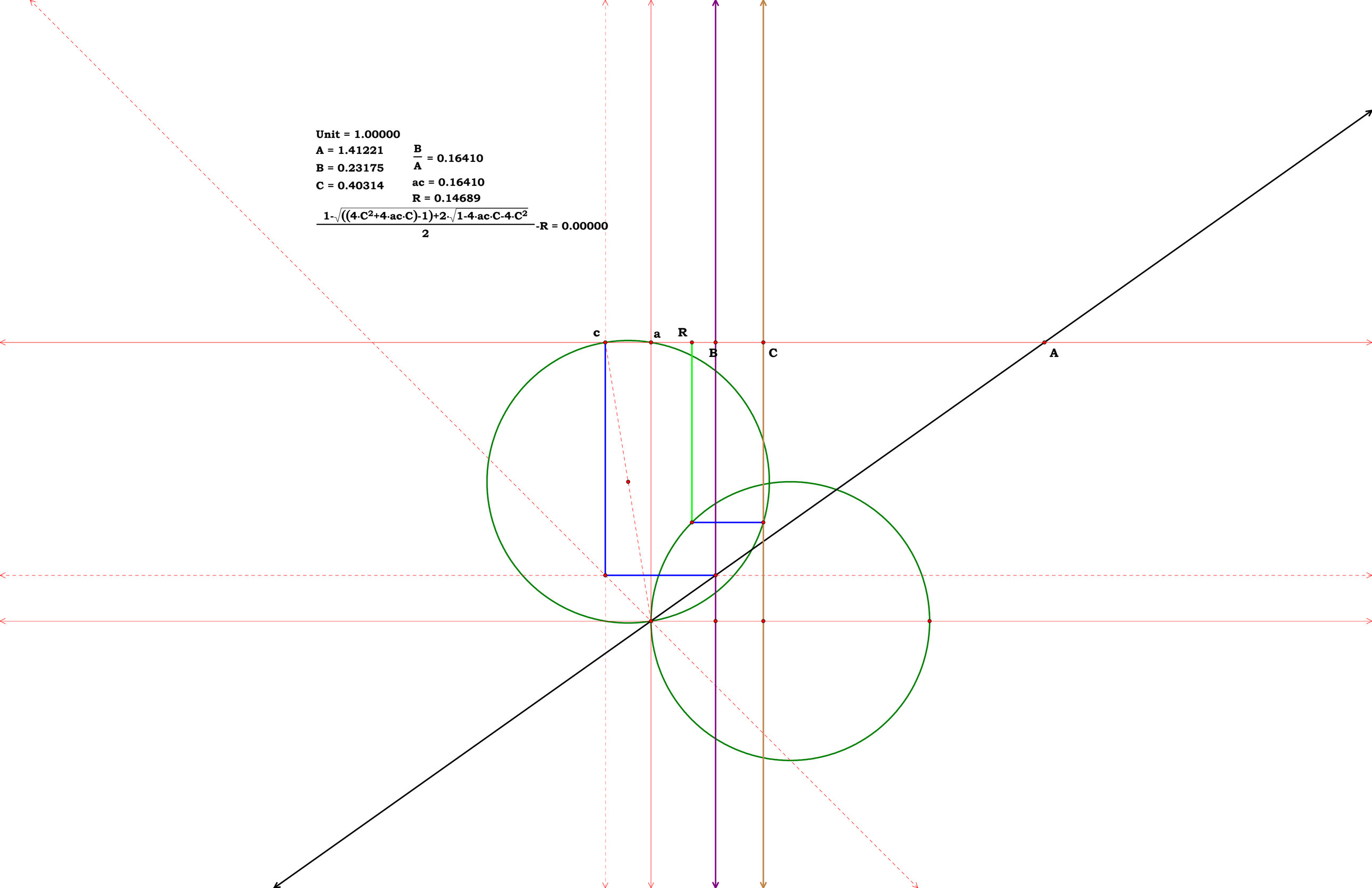
ac = 0.15260

R = 0.18849

$\frac{1-\sqrt{((4\cdot C^2+4\cdot ac\cdot C)-1)+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2}}}{2}$-R = 0.00000




Unit = 1.00000
A = 1.39773
B = 0.14484
C = 0.44660
B/A = 0.10363
ac = 0.10363
R = 0.25284
(1-√((4·C²+4·ac·C)-1)+2·√(1-4·ac·C-4·C²))/2 -R = 0.00000
c
a
B
R
C
A


Unit = 1.00000
A = 1.41221
B = 0.23175
C = 0.40314
B/A = 0.16410
ac = 0.16410
R = 0.14689
(1-√((4·C²+4·ac·C)-1)+2·√(1-4·ac·C-4·C²))/2 -R = 0.00000
c
a
R
B
C
A

Unit = 1.00000

A = 2.20160

B = 0.25106

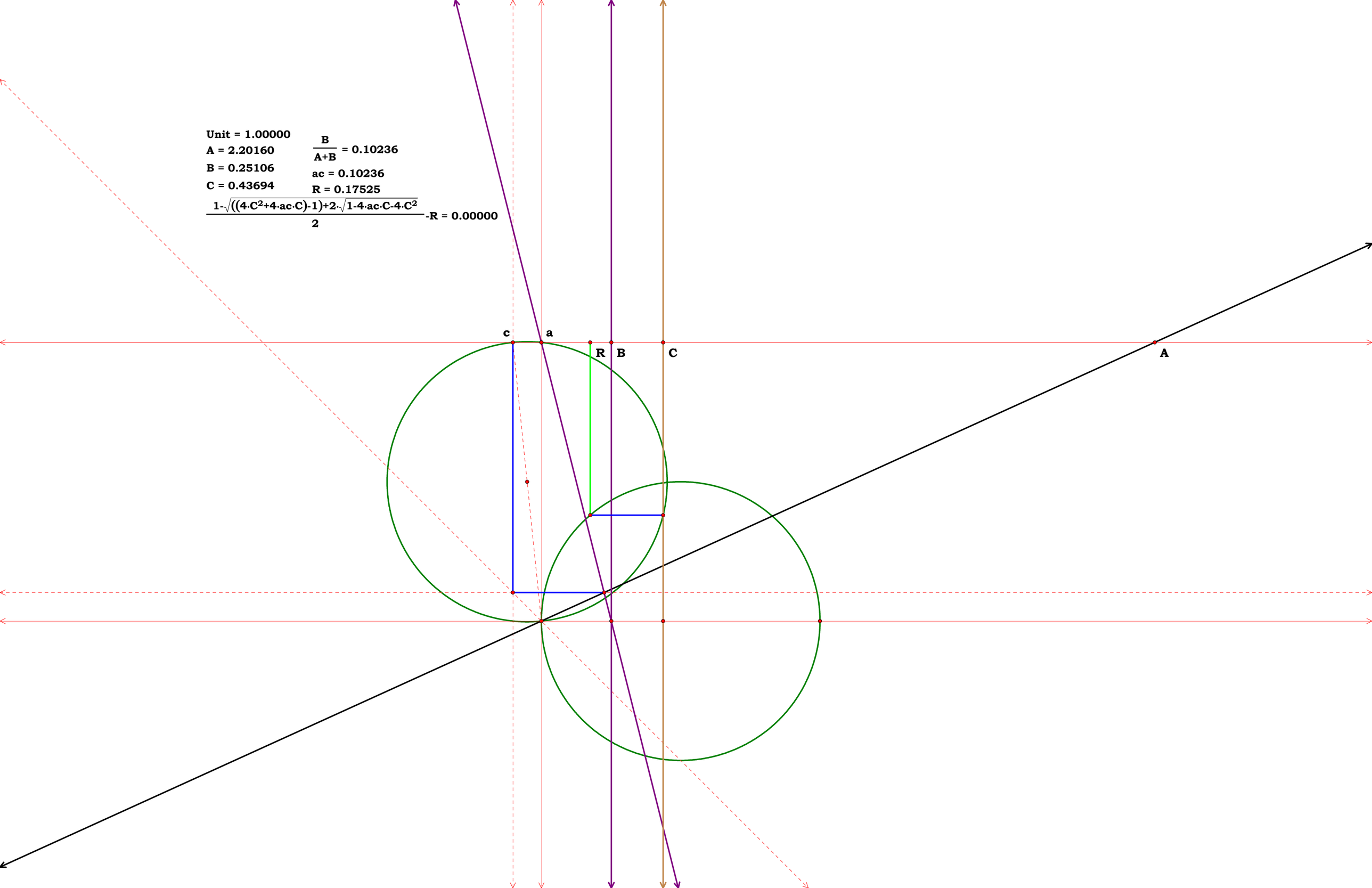
C = 0.43694

$\frac{B}{A+B} = 0.10236$

ac = 0.10236

R = 0.17525

$\frac{1-\sqrt{((4\cdot C^2+4\cdot ac\cdot C)-1)+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2}}}{2}-R = 0.00000$



Unit = 1.00000

A = 0.16657

B = 1.11046

C = 0.42487

$\frac{A}{B}$ = 0.15000

ac = 0.15000

R = 0.23523

$\frac{1-\sqrt{((4\cdot C^2+4\cdot ac\cdot C)-1)+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2}}}{2}$ -R = 0.00000

c

a

R

A

C

B

Unit = 1.00000

A = 1.02114

B = 1.22392

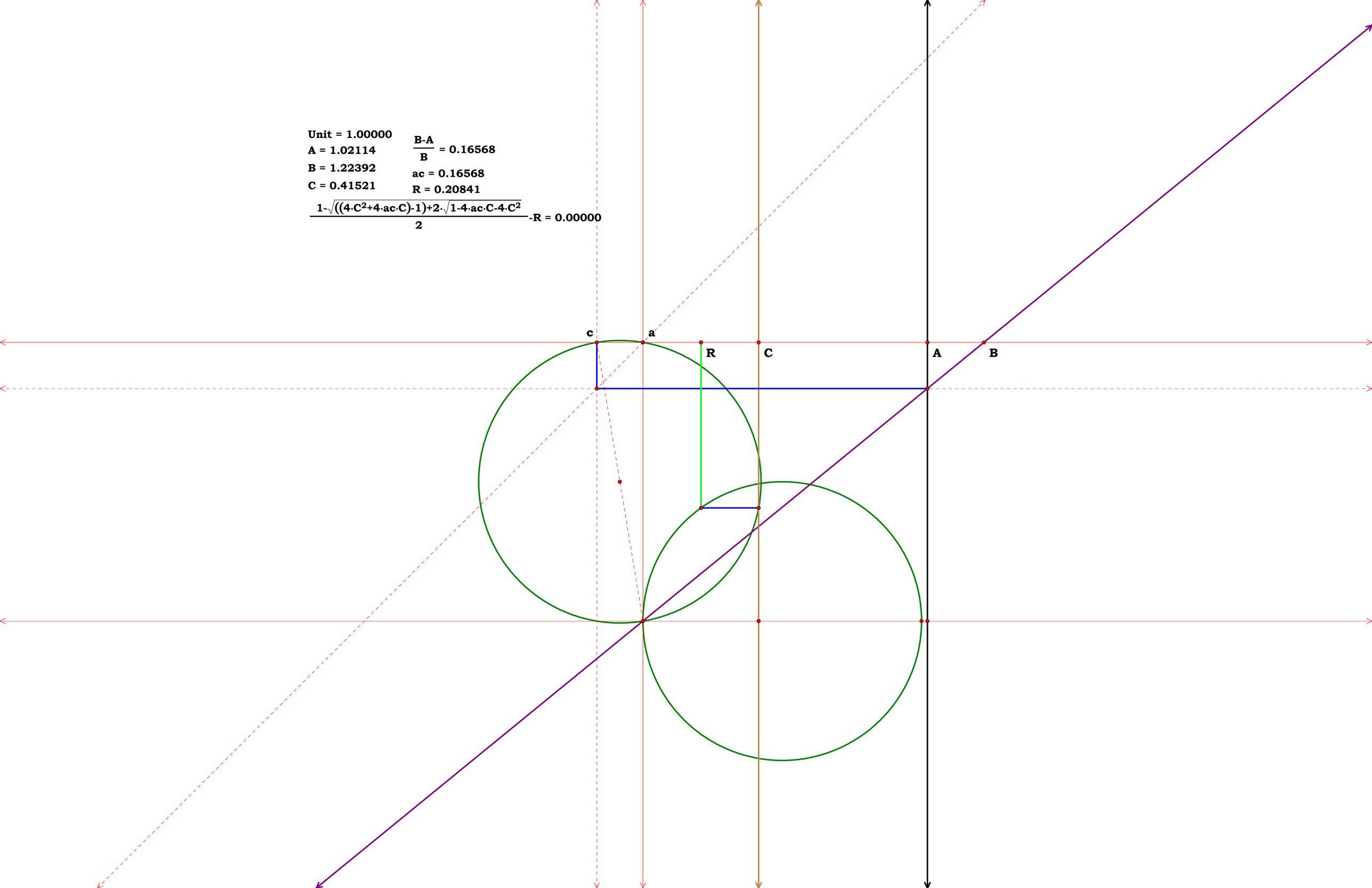
C = 0.41521

$\frac{B-A}{B}$ = 0.16568

ac = 0.16568

R = 0.20841

$\frac{1-\sqrt{((4\cdot C^2+4\cdot ac\cdot C)-1)+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2}}}{2}$-R = 0.00000



Unit = 1.00000

A = 0.30900

B = 0.22209

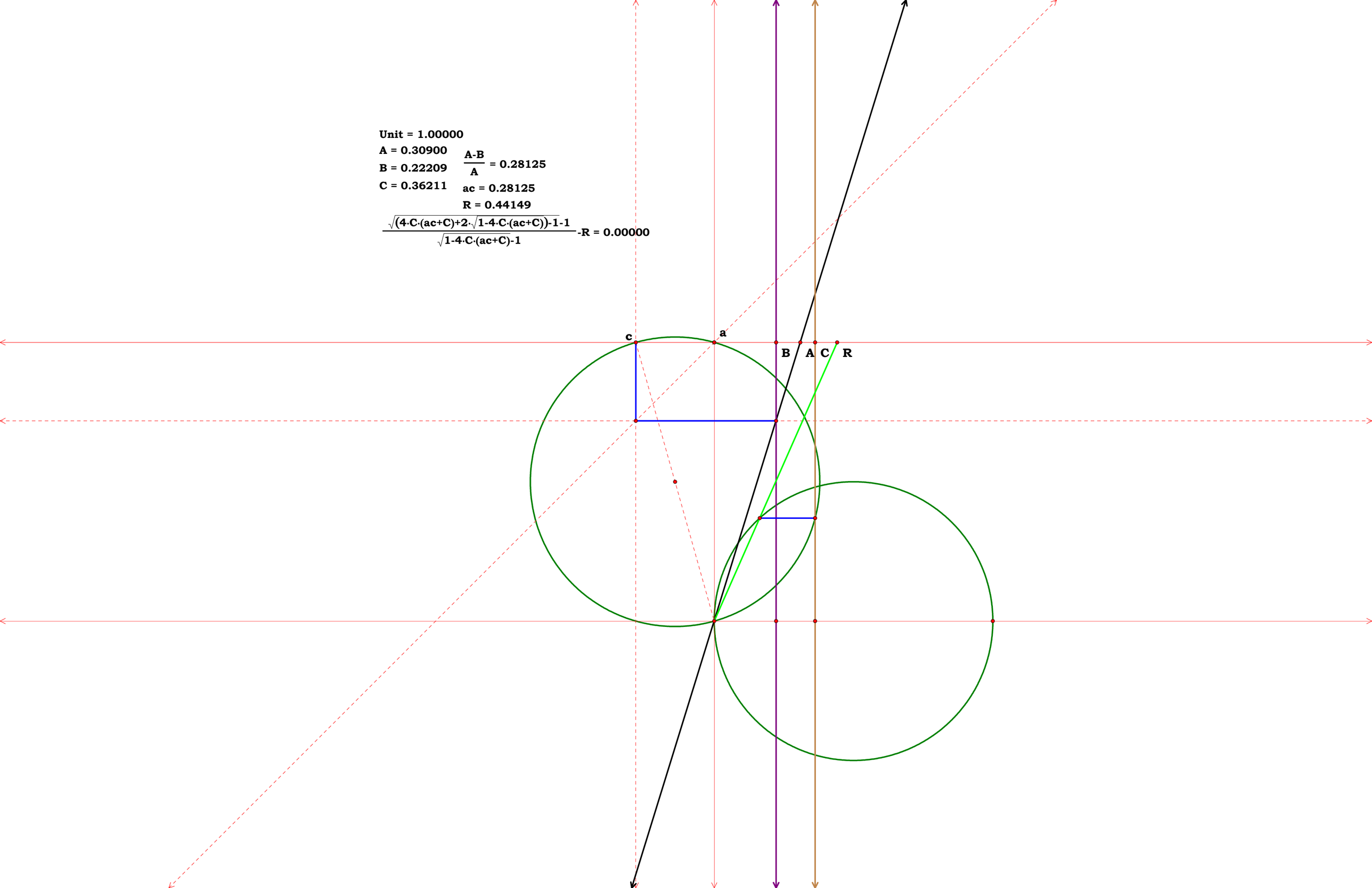
C = 0.36211

$\frac{A-B}{A} = 0.28125$

ac = 0.28125

R = 0.44149

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}}{\sqrt{1-4\cdot C\cdot(ac+C)}-1} - R = 0.00000$



Unit = 1.00000

A = 1.75500

B = 0.10863

C = 0.42246

$\frac{B}{A}$ = 0.06190

ac = 0.06190

R = 0.31554

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}}{\sqrt{1-4\cdot C\cdot(ac+C)-1}}$ -R = 0.00000

c

a

B

R

C

A

Unit = 1.00000

A = 0.19071

B = 1.39773

C = 0.40556

$\frac{A}{A+B} = 0.12006$

ac = 0.12006

R = 0.34469

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}}{\sqrt{1-4\cdot C\cdot(ac+C)}-1} - R = 0.00000$

c a R A C B

Unit = 1.00000

A = 1.70672

B = 0.31141

C = 0.42004

$\frac{B}{A+B} = 0.15431$

ac = 0.15431

R = 0.51374

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}}{\sqrt{1-4\cdot C\cdot(ac+C)}-1} - R = 0.00000$

c

a

B

C

R

A

Unit = 1.00000

A = 0.19554

B = 1.74535

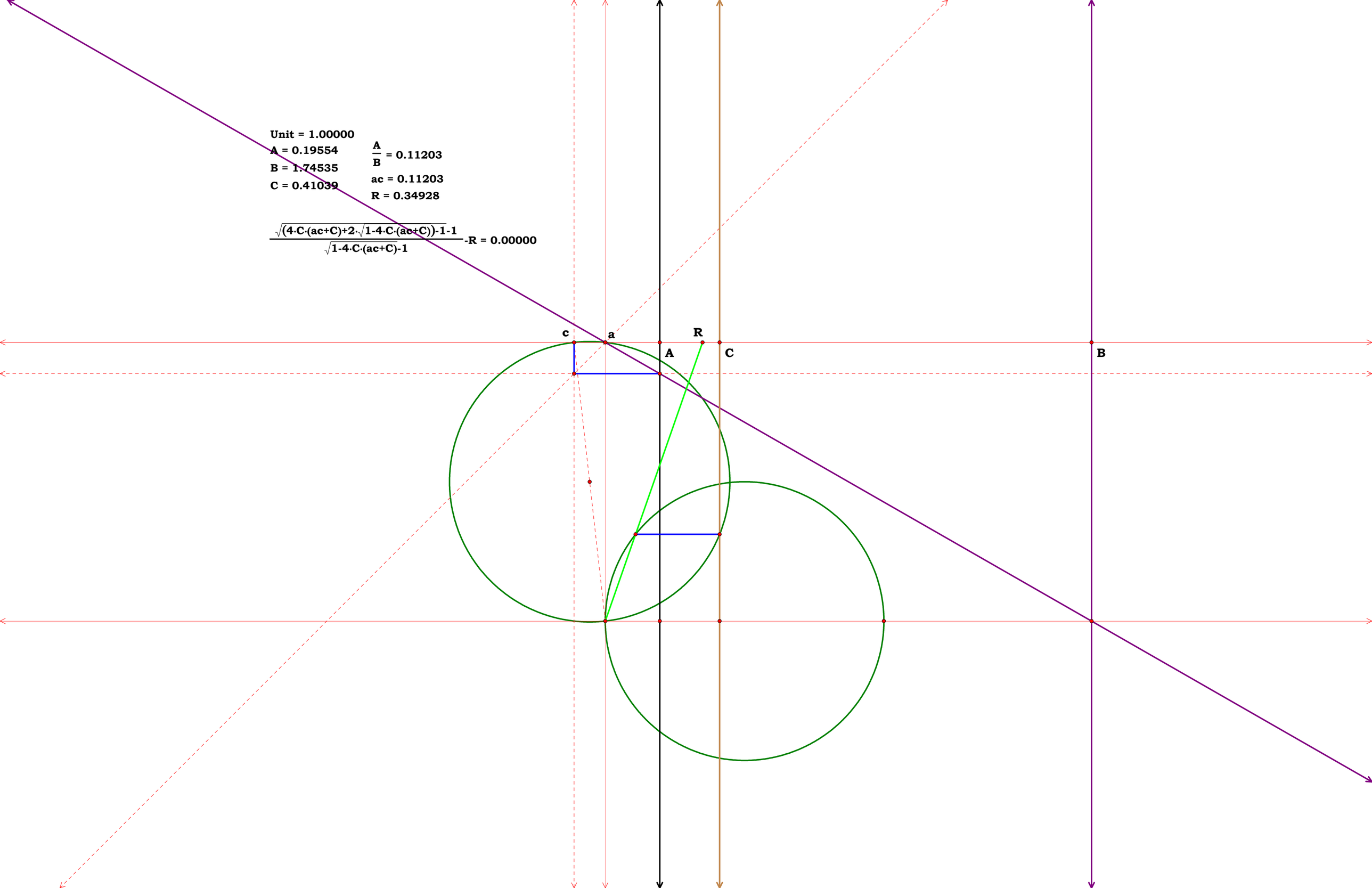
C = 0.41039

$\frac{A}{B}$ = 0.11203

ac = 0.11203

R = 0.34928

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}}{\sqrt{1-4\cdot C\cdot(ac+C)}-1}$ -R = 0.00000



Unit = 1.00000

A = 0.55281

B = 0.73628

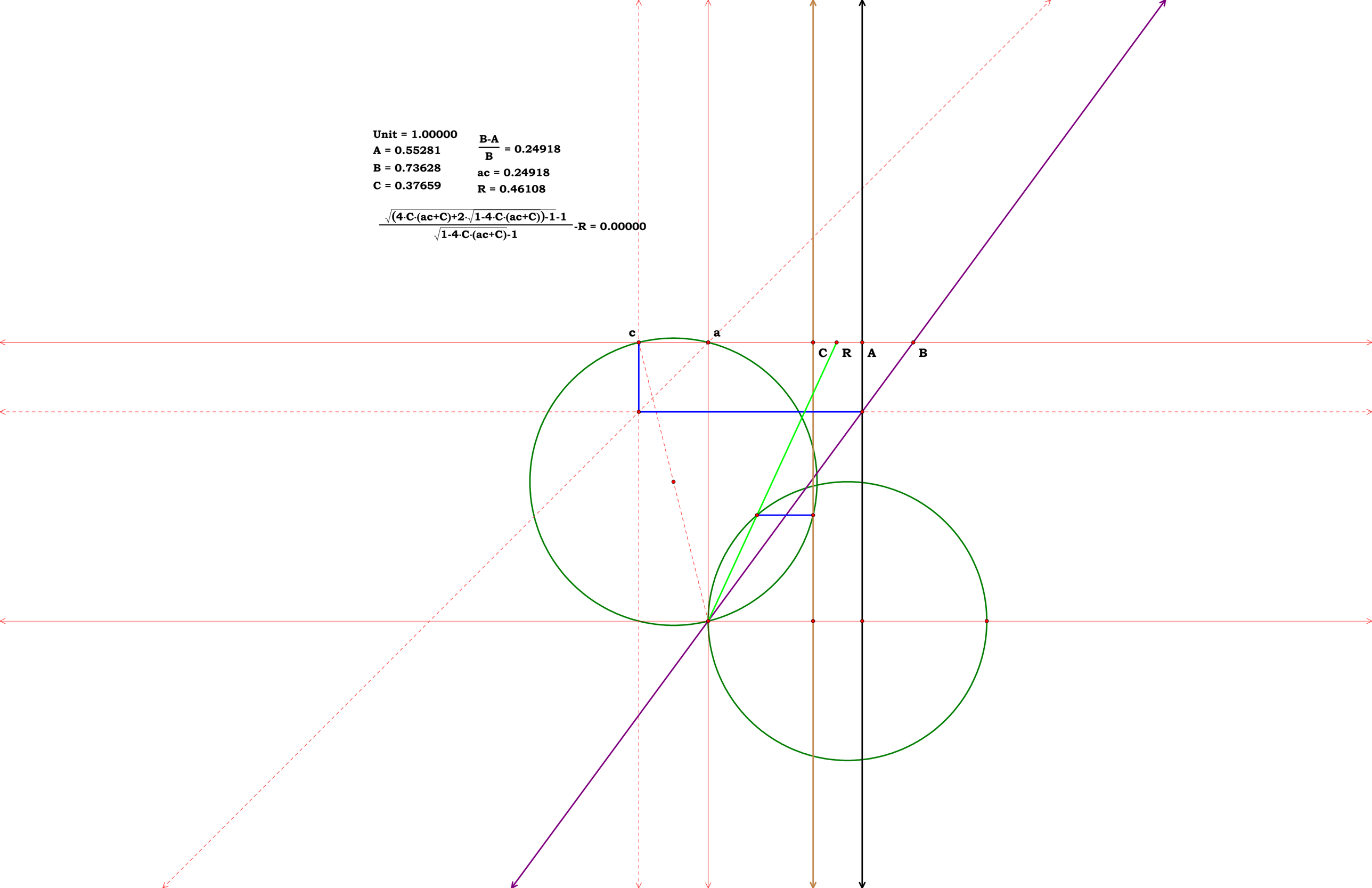
C = 0.37659

$\frac{B-A}{B} = 0.24918$

ac = 0.24918

R = 0.46108

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1-1}{\sqrt{1-4\cdot C\cdot(ac+C)-1}}-R = 0.00000$



Unit = 1.00000

A = 0.40797

B = 0.25830

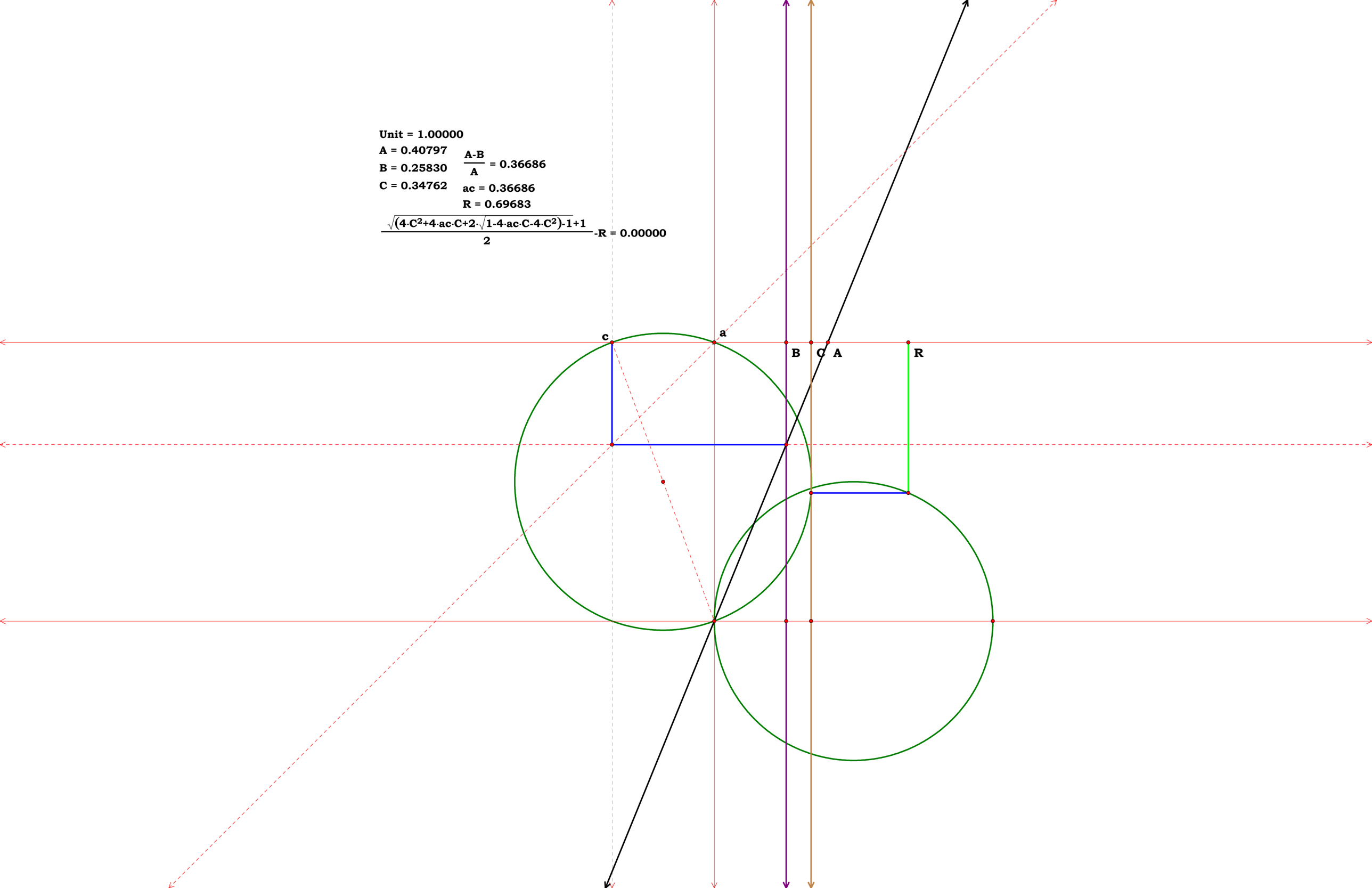
C = 0.34762

$\frac{A-B}{A} = 0.36686$

ac = 0.36686

R = 0.69683

$\frac{\sqrt{(4 \cdot C^2+4 \cdot ac \cdot C+2 \cdot \sqrt{1-4 \cdot ac \cdot C-4 \cdot C^2})-1+1}{2} - R = 0.00000$



Unit = 1.00000

A = 2.03262

B = 0.06035

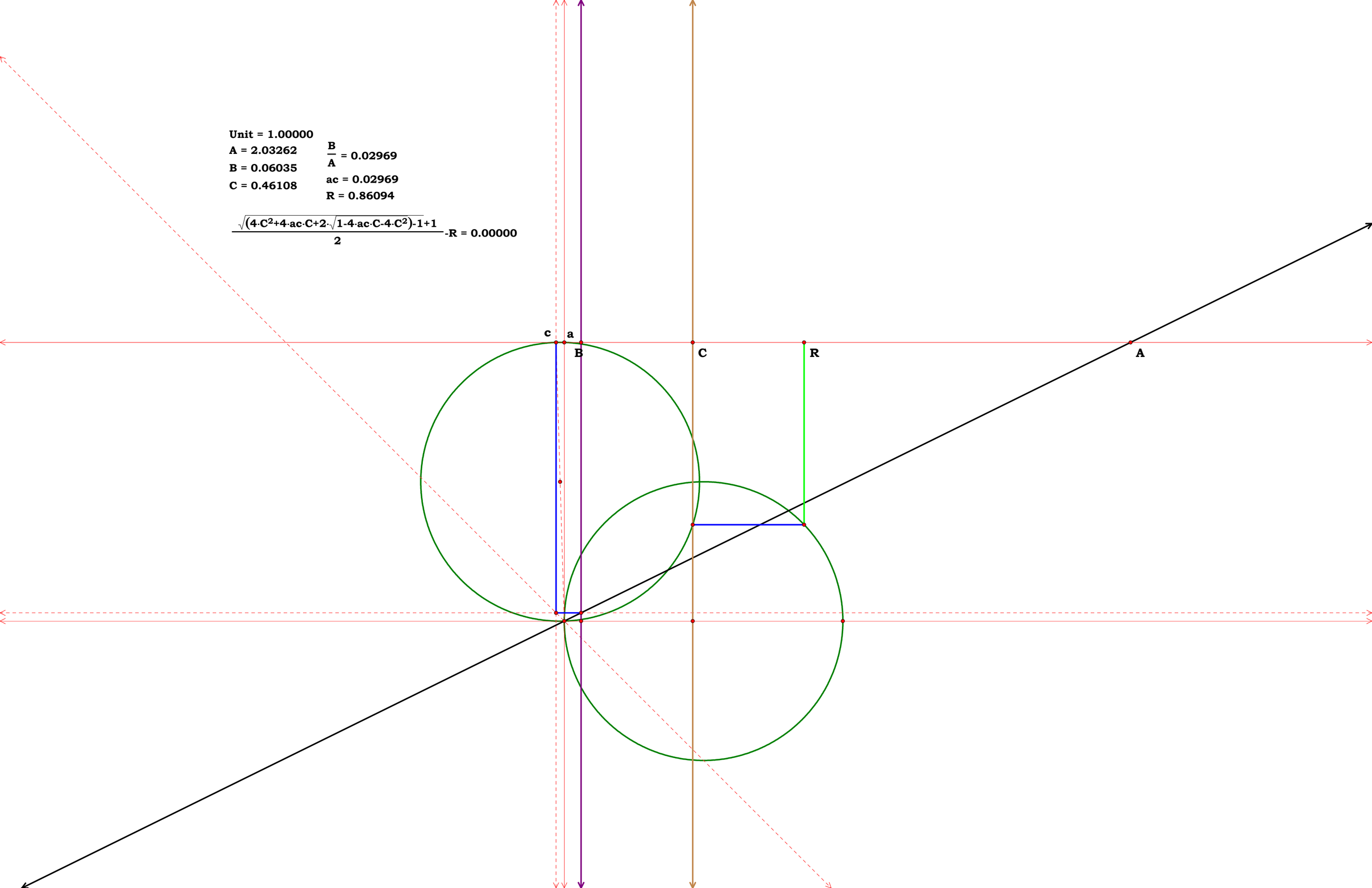
C = 0.46108

$\frac{B}{A}$ = 0.02969

ac = 0.02969

R = 0.86094

$\frac{\sqrt{(4\cdot C^2+4\cdot ac\cdot C+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2})-1+1}}{2}$-R = 0.00000



Unit = 1.00000

A = 0.18588

B = 1.44601

C = 0.42970

$\frac{A}{A+B} = 0.11391$

ac = 0.11391

R = 0.83422

$\frac{\sqrt{(4 \cdot C^2+4 \cdot ac \cdot C+2 \cdot \sqrt{1-4 \cdot ac \cdot C-4 \cdot C^2})-1+1}}{2} - R = 0.00000$

c

a

A

C

R

B

Unit = 1.00000

A = 2.53715

B = 0.16898

C = 0.42728

$\frac{B}{A+B}$ = 0.06244

ac = 0.06244

R = 0.90139

$\frac{\sqrt{(4\cdot C^2+4\cdot ac\cdot C+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2})-1+1}}{2}$-R = 0.00000

c

a

B

C

R

A

Unit = 1.00000
A = 0.19071
B = 1.51843
C = 0.41280

$\frac{A}{B}$ = 0.12560

ac = 0.12560
R = 0.87260

$\frac{\sqrt{(4 \cdot C^2+4 \cdot ac \cdot C+2 \cdot \sqrt{1-4 \cdot ac \cdot C-4 \cdot C^2})-1+1}}{2}$ -R = 0.00000

c
a
A
C
R
B

Unit = 1.00000

A = 0.22451

B = 0.29210

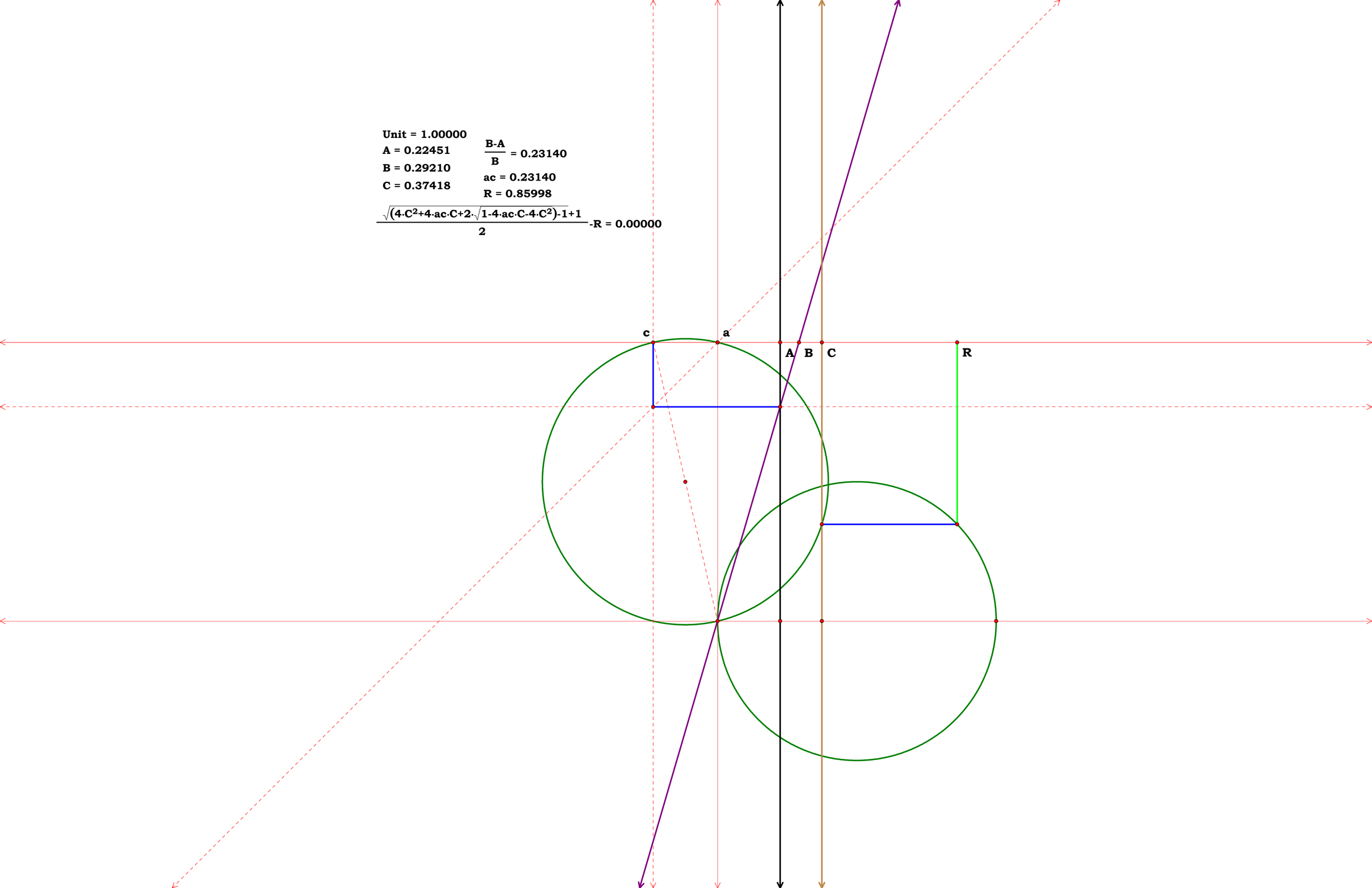
C = 0.37418

$\frac{B-A}{B}$ = 0.23140

ac = 0.23140

R = 0.85998

$\frac{\sqrt{(4\cdot C^2+4\cdot ac\cdot C+2\cdot\sqrt{1-4\cdot ac\cdot C-4\cdot C^2})-1}+1}{2}$-R = 0.00000



Unit = 1.00000

A = 0.32107

B = 0.26554

C = 0.70007

$\frac{A-B}{A}$ = 0.17293

ac = 0.17293

R = 0.91490

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)}+4\cdot\sqrt{C\cdot(1-C)}-ac}{2\cdot\sqrt{C\cdot(1-C)}}$ -R = 0.00000

c

a

B

A

C

R

Unit = 1.00000

A = 0.26072

B = 0.16898

C = 0.45867

$\frac{B}{A}$ = 0.64815

ac = 0.64815

R = 0.54539

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)+4\cdot\sqrt{C\cdot(1-C)}}-ac}{2\cdot\sqrt{C\cdot(1-C)}}$ -R = 0.00000

c

a

B

A

C

R

Unit = 1.00000

A = 0.19071

B = 1.58119

C = 0.74111

$\frac{A}{A+B} = 0.10763$

ac = 0.10763

R = 1.01647

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)}+4\cdot\sqrt{C\cdot(1-C)}-ac}{2\cdot\sqrt{C\cdot(1-C)}} - R = 0.00000$

c

a

A

C

R

B

Unit = 1.00000

A = 1.43635

B = 0.34038

C = 0.80146

$\frac{B}{A+B} = 0.19158$

ac = 0.19158

R = 1.01069

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)+4\cdot\sqrt{C\cdot(1-C)}}-ac}{2\cdot\sqrt{C\cdot(1-C)}}-R = 0.00000$

c

a

B

C

R

A

Unit = 1.00000

A = 0.18347

B = 1.92157

C = 0.74594

$\frac{A}{B}$ = 0.09548

ac = 0.09548

R = 1.03451

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)+4\cdot\sqrt{C\cdot(1-C)}}-ac}{2\cdot\sqrt{C\cdot(1-C)}}$ -R = 0.00000

c

a

A

C

R

B

Unit = 1.00000

A = 0.22451

B = 0.39107

C = 0.97527

$\frac{B-A}{B}$ = 0.42593

ac = 0.42593

R = 1.33418

$\frac{\sqrt{ac^2+4\cdot C\cdot(C-1)+4\cdot\sqrt{C\cdot(1-C)}}-ac}{2\cdot\sqrt{C\cdot(1-C)}}$ -R = 0.00000

c

a

A

B

C

R

Unit = 1.00000

A = 0.30900

B = 0.27279

C = 0.43694

$\frac{A-B}{A} = 0.11719$

ac = 0.11719

R = 1.90743

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1+1}{1-\sqrt{1-4\cdot C\cdot(ac+C)}} - R = 0.00000$

c a B A C R

Unit = 1.00000

A = 2.28851

B = 0.23175

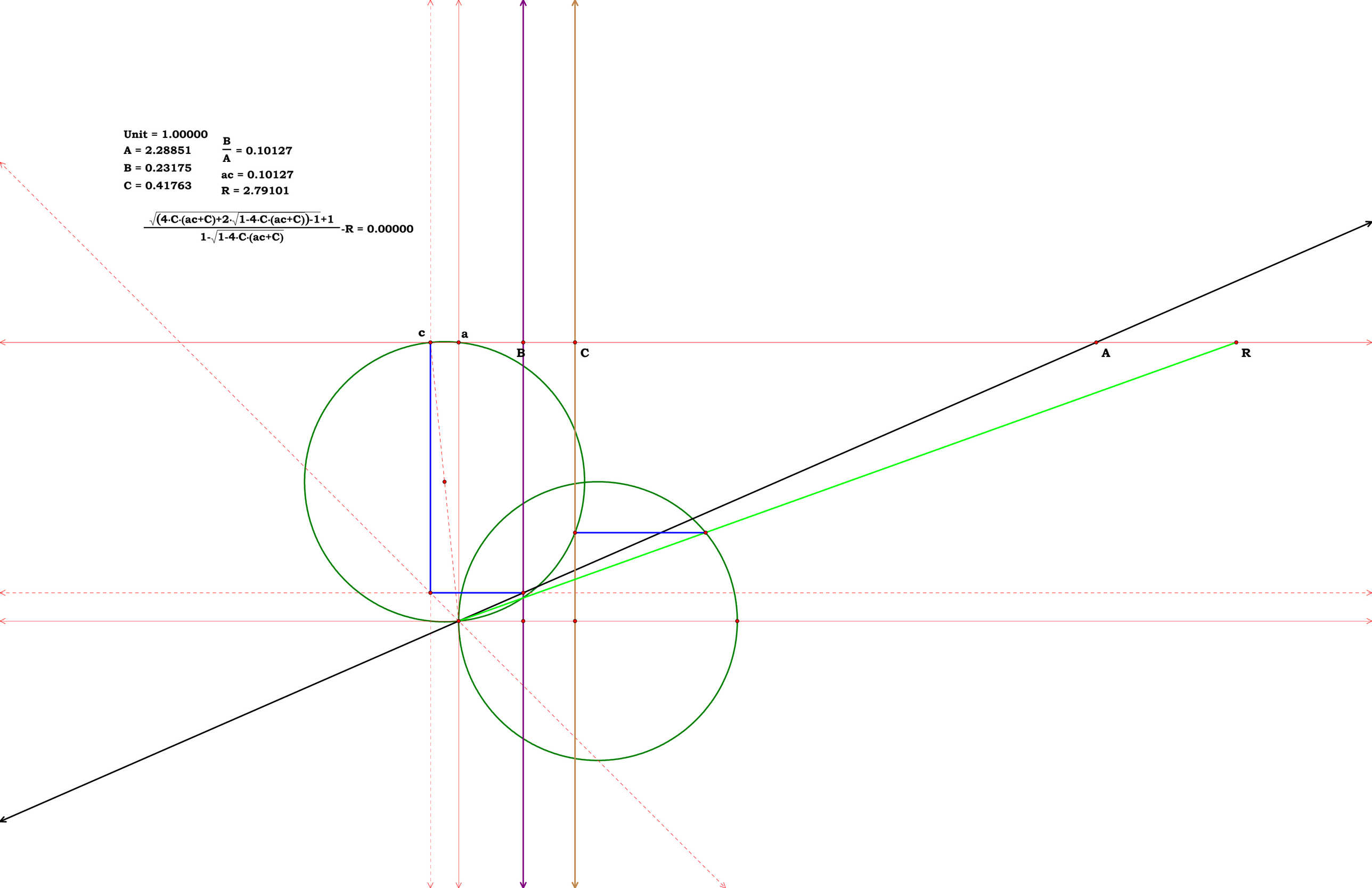
C = 0.41763

$\frac{B}{A} = 0.10127$

ac = 0.10127

R = 2.79101

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1+1}{1-\sqrt{1-4\cdot C\cdot(ac+C)}}-R = 0.00000$



Unit = 1.00000

A = 0.19071

B = 1.72845

C = 0.44177

$\frac{A}{A+B} = 0.09937$

ac = 0.09937

R = 2.03855

$\frac{\sqrt{(4 \cdot C \cdot (ac+C)+2 \cdot \sqrt{1-4 \cdot C \cdot (ac+C)})}-1+1}{1-\sqrt{1-4 \cdot C \cdot (ac+C)}} - R = 0.00000$

c

a

A

C

B

R

Unit = 1.00000

A = 1.66568

B = 0.27279

C = 0.41763

$\frac{B}{A+B}$ = 0.14072

ac = 0.14072

R = 2.25738

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)}-1}+1}{1-\sqrt{1-4\cdot C\cdot(ac+C)}}$-R = 0.00000

c

a

B

C

A

R

Unit = 1.00000

A = 0.17864

B = 1.63672

C = 0.43694

$\frac{A}{B}$ = 0.10914

ac = 0.10914

R = 2.05661

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1+1}}{1-\sqrt{1-4\cdot C\cdot(ac+C)}}$ -R = 0.00000

c

a

A

C

B

R

Unit = 1.00000

A = 0.26554

B = 0.39107

C = 0.34762

$\frac{B-A}{B}$ = 0.32099

ac = 0.32099

R = 2.28382

$\frac{\sqrt{(4\cdot C\cdot(ac+C)+2\cdot\sqrt{1-4\cdot C\cdot(ac+C)})-1+1}{1-\sqrt{1-4\cdot C\cdot(ac+C)}}$ -R = 0.00000

c

a

A

C

B

R